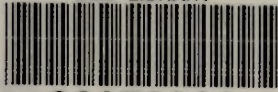


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October 1991



WILDERNESS STUDY REPORT

Volume One, Pages 1-168

Craig District Study Areas



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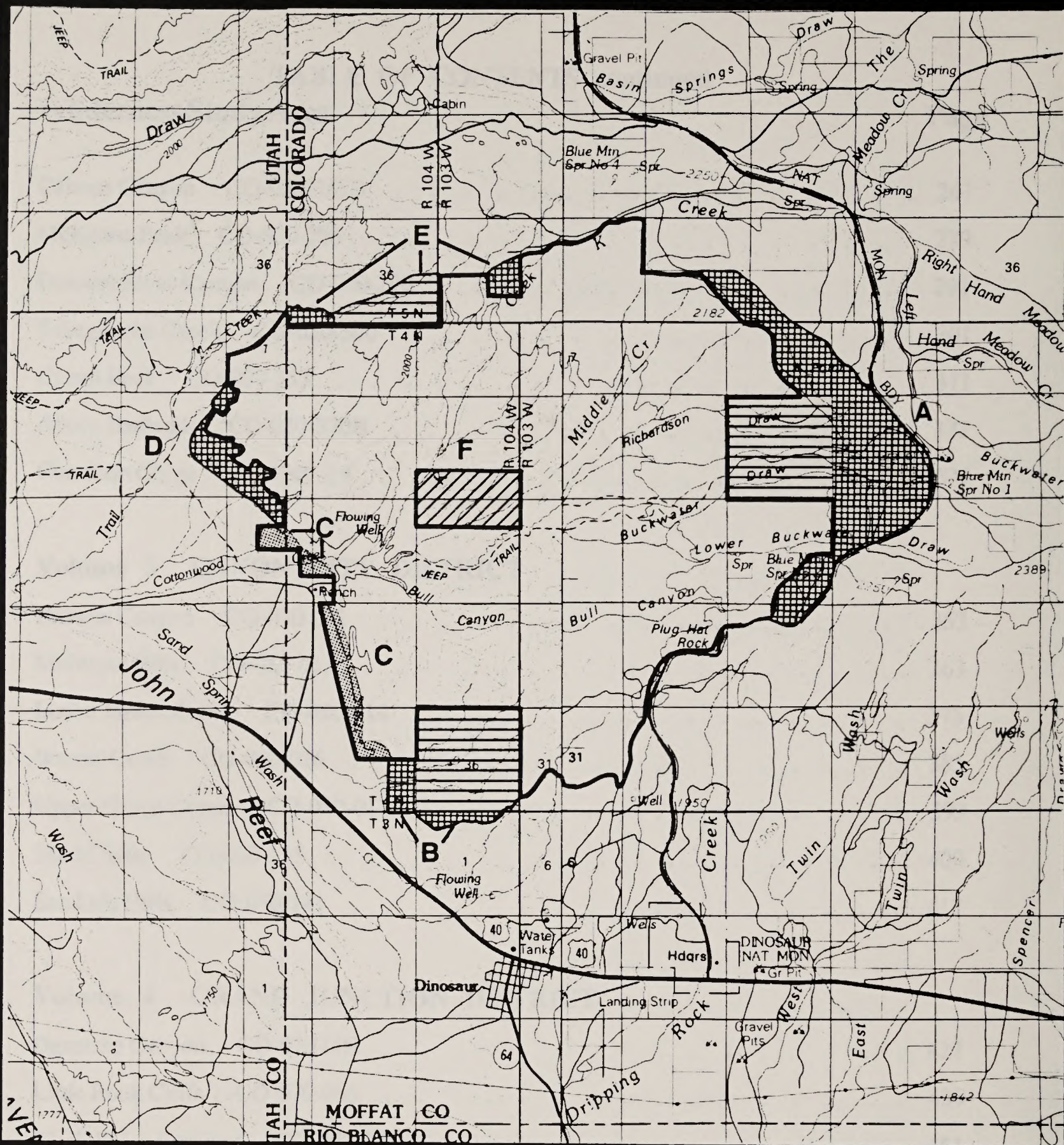
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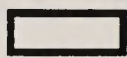
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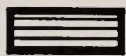
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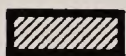
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RECOMMENDED FOR
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NONWILDERNESSLAND OUTSIDE WSA
RECOMMENDED FOR WILDERNESS

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Bull Canyon WSA
Proposal
CO-010-001 and UT-080-419

January 1991

BULL CANYON

WILDERNESS STUDY AREA

The Study Area -- 12,297 acres

The Bull Canyon WSA (CO-010-001 and UT-080-419) is located in Moffat County, Colorado, and in Uintah County, Utah, approximately 4 miles north of Dinosaur, Colorado. The WSA includes 12,297 acres of BLM lands (11,777 acres in Colorado and 520 acres in Utah) and a 320-acre private inholding in Colorado. Three sections of state lands (1,920 acres) adjoin the WSA in Colorado. The area is bounded on the north, east, and south by ways on BLM land and state land property lines and to the west and northwest by topographic features and state and private property lines. The WSA is shown on the map.

The study area is more characteristic of the arid canyon ecosystems found in the Colorado Plateau than in the Rocky Mountain Forest Province ecoregion in which this WSA is located. Geographically, the area is cut by deep ridges and canyons of sandstone eroded by rain and snowmelt waters. Interesting geology with colorful cliffs, a maze of canyons, and unique rock formations are a result of deep erosion. Elevations range from 5,600 feet on K Creek in Utah to 7,400 feet on the northern boundary. The vegetation includes semi-arid species such as sagebrush and pinyon-juniper communities, with riparian zones along the drainages.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Craig District Wilderness Final Environmental Impact Statement (EIS) published November 5, 1990. Three alternatives were analyzed in the EIS. The boundary adjustment alternative recommends 13,700 BLM acres as wilderness; the result of 12,150 acres of the original WSA, adding 1,550 BLM acres from outside the WSA and eliminating 147 acres from the original WSA. The all wilderness alternative (the original WSA 12,297 acres), and the no wilderness alternative were also considered.

Recommendations and Rationale

13,700 acres recommended for wilderness

147 acres recommended for nonwilderness

The recommendation is to designate approximately 13,700 acres of BLM public land as wilderness and release 147 acres for uses other than wilderness (boundary adjustment A alternative). This area is shown on the map. This recommendation is the environmentally preferable alternative. This recommendation includes an area larger than the original WSA and would result in the least change in the natural environment over the long term.

In order to protect the wilderness values and define the area, the area's boundaries have been adjusted by locating them along easily identifiable topographic and manmade features rather than administrative boundaries (e.g., section lines). These boundary adjustments would result in more effective management and enhance opportunities for solitude, primitive and unconfined recreation, and protect the viewshed of the area. It would also protect the viewshed of the heavily traveled Park Service road and Escalante overlook. Management of the wilderness area would also be enhanced by the blocked configuration. The addition of all or portions of 3 state land sections would complement and further block up the area, providing easily identifiable boundaries.

The northeast and eastern boundary is realigned along a road and fence on K Point ridge and follows the Dinosaur National Monument access road which is fenced and easily identified on the ground (see parcel A on map). This area also contains critical elk habitat (summer range). A boundary adjustment in the southwest corner of the area would add an entire watershed in steep rugged terrain and includes most of a state land section (parcel B). The recommended boundary follows a way on the south.



Photo 1. Bull Canyon WSA. View west over Bull Canyon from Plug Hat Rock overlook. Cliff Ridge (outside the WSA) in Utah in the background.

Other small boundary adjustments (deleted parcels C and added parcel D) were made to provide a more easily identifiable boundary along a ridge top in the west. Parcel E was added to provide a more easily identifiable northern boundary along an existing way and would bring part of a state land section into the WSA. If Bull Canyon is designated as wilderness, the 320 acre private parcel (parcel F) will be considered for acquisition (see Table 5).

Bull Canyon is recommended because of the outstanding scenery and opportunities for solitude and primitive and unconfined recreation and the presence of special features. The Bull Canyon area includes vistas from the National Park Service Plug Hat Rock Overlook and the Nature Trail (see Photo 1), the Escalante Overlook as well as the maze of canyons and colorful geology in Bull Canyon, Buckwater Draw, Middle Creek, and K Creek which converge into a wide valley to the west. (See Photo 2) The canyons provide

access for hiking, backpacking, hunting, rock climbing, photography, and other recreation pursuits.

The relatively low elevation and proximity to U.S. Highway 40 makes the area easily accessible for wilderness recreation opportunities throughout the year. The Bull Canyon WSA is within a 4 to 5 hour drive of the Salt Lake City, Utah metropolitan area, about 6 hours from the Denver, Colorado metropolitan area, and approximately 3 hours from Grand Junction, Colorado.

Designation of the Bull Canyon WSA as wilderness would preserve an area of scenic, undeveloped, canyon lands. The area is more representative of the semi-arid ecosystems, geologic and topographic features found in the Colorado Plateau area rather than in the Rocky Mountain Forest physiographic region. (See Photo 3) Pinyon-juniper, sagebrush, and native grasses and forbs



Photo 2. Bull Canyon WSA. View southeast in Middle Creek.

are the main vegetation communities. Douglas fir, cottonwoods, boxelder, and willows comprise the often dense riparian vegetation found along drainages in the WSA. (See Photo 4) Bull Canyon, in its natural state, complements the natural features present in Dinosaur National Monument to the north. The National Park Service has integrated the natural and historic features of this WSA and surrounding area into its visitor education programs through the placement of interpretive facilities along the Harpers Corner access road (Plug Hat Rock picnic area overlooks and Natural Trail, and Escalante overlook) that borders and provides vistas of the Bull Canyon complex. Wilderness designation of Bull Canyon would protect the natural and historic features, as well as scenic vistas, of the area. (See Photo 1)

No major manageability problems or resource conflicts would result from wilderness designation. No new range improvements have been proposed and no conflicts with range management are expected. Portions of 2 livestock grazing allotments lie within the recommended area with an estimated 920 animal unit months (AUMs) of livestock forage available. Existing range improvements within the proposed area consist of 2 developed springs with watering troughs, 7 stock ponds, and 3.5 miles of fence. Maintenance of these existing range improvements would continue.

Oil and gas potential in the area is considered to be low according to the U.S. Geological Survey and Bureau of Mines report for the area and the WSA is not considered prospectively valuable for any mineral resources.

Table 1 - Land Status and Acreage Summary

	<u>Colorado Acreage</u>	<u>Utah Acreage</u>	<u>Total Acreage</u>
<u>Within Wilderness Study Area</u>			
BLM (surface and subsurface)	11,777	520	12,297
Split Estate (BLM surface only)	0	0	0
Inholdings (state, private)	<u>320</u>	<u>0</u>	<u>320</u>
Total	12,097	520	12,617
<u>Within the Recommended Wilderness Boundary</u>			
BLM (within WSA)	11,670	480	12,150
BLM (outside WSA)	1,410	140	1,550
Split Estate (within WSA)	<u>0</u>	<u>0</u>	<u>0</u>
Total BLM Land Recommended for Wilderness	13,080	620	13,700
Inholdings (state, private) * Includes 32 private	1,855	0	1,855
<u>Within the Area Not Recommended for Wilderness</u>			
BLM	107	40	147
Split Estate	<u>0</u>	<u>0</u>	<u>0</u>
Total BLM Land Not Recommended for Wilderness	107	40	147
Inholdings (State, Private)	0	0	0
* Table 5 contains a description of inholdings included within the recommended boundary.			

Criteria Considered in Developing the Wilderness Recommendations

WILDERNESS CHARACTERISTICS

Naturalness

The Bull Canyon WSA is predominately natural with negligible human imprints. The area is cut by deep scenic canyons and ridges of colorful sandstone, all of which drain to the west and converge in the west central portion of the WSA into a wide basin.

Elevations within the proposed area span some 2,100 feet ranging from 5,700 feet in Utah to 7,880 feet at K Point to the northeast.

The vegetation consists of semi-arid ecosystems with pinyon pine and juniper woodlands as the dominate community as well as sagebrush, native grasses, forbs, and saltbush plant communities. Riparian areas along the drainages contain boxelder, cottonwood, and willow at times in dense stands. Douglas fir trees are found in scattered areas within the canyons.



Photo 3. Bull Canyon WSA. View into the upper end of Bull Canyon.

Minor imprints within the recommended area consist of 2 developed springs with watering troughs, 7 stock ponds, and 3.5 miles of fence. These imprints are scattered and screened by vegetation and topography making them substantially unnoticeable within the area.

The entire WSA is winter range for mule deer and most of the area is habitat for elk with about 600 acres of critical habitat (summer range) for elk within the WSA and additional critical elk habitat within the large addition of parcel A on Map 1. Golden eagles nest within the area as do many other birds, and the area is habitat for many other mammals, reptiles, and amphibians.

Solitude

The diverse topography, dense vegetation, and the areas blocked configuration all combine to provide outstanding opportunities to experience solitude throughout the WSA. The recommended area provides additional room for visitors to disperse

and become isolated. The ruggedness and natural character of the area prevent outside influences from affecting the visitor's experience of solitude.

On the higher elevations, a visitor may view the vast open space created by the basin, which is accented by the scenic backdrop of Cliff Ridge in Utah. This open space, plus the isolation afforded by the numerous canyons, enhances the opportunities for solitude.

Primitive and Unconfined Recreation

The entire area offers outstanding opportunities for primitive and unconfined recreation such as hiking, backpacking, camping, and scenic viewing. Bird watching, nature study, and horseback riding also occur in the area. Opportunities for photographing the area's natural beauty are exceptional.

The gradual stream gradients which lead out of K Creek, Middle Creek, Buckwater Draw, and



Photo 4. Bull Canyon WSA. Boxelder forest in Bull Canyon.

Bull Canyon offer superb, rugged desert hikes. Buckwater Draw is enclosed by striking sandstone cliffs that have alcoves for exploring. Bull Canyon has spectacular, sheer cliffs that provide a scenic backdrop for challenging hikes in the rugged upper end of the canyon. Middle Creek provides easy hikes along the ridgetops or up the canyon with interesting rock formations and multicolored geology over to and in the K Creek drainage. These areas provide nesting for hawks, eagles, owls, and other birds. Coyote and deer may be seen in the late evening along hilltops and drainages.

Special Features

The Dominguez/Escalante Expedition of 1776 reportedly camped within the west central portion of the WSA. The history of the encampment is well documented and recounts that the expedition drew water from a flowing well and hunted buffalo there.

The National Park Service (Dinosaur National Monument) manages 2 overlook sites (Plug Hat Picnic Area and Escalante Overlook) adjacent to this area. The picnic area overlooks the WSA and interpretive signs and a natural trail describe the area's geology and history. National Park Service

statistics for 1989 indicate 105,126 visitors traveled the Harper's Corner Road leading to the canyons of Dinosaur National Monument and paralleling the WSA. Many visitors frequent the picnic site and overlooks for the breathtaking vista into and over the WSA.

The University of Arizona has studied relic pinyon pine in the area to establish dendrochronological data on climate extending more than 600 years into the past. Although none is currently proposed, continued research in the Bull Canyon area is anticipated. This would not affect wilderness characteristics.

A portion of the WSA is identified as critical habitat (summer range) for elk.

Significant paleontological resources have been found in the vicinity of the WSA and are likely to occur within the WSA.

DIVERSITY IN THE NATIONAL WILDERNESS PRESERVATION SYSTEM

Assessing the diversity of natural systems and features as represented by ecosystems

Wilderness designation of this WSA would add a landform and ecosystems which currently have little representation in the National Wilderness Preservation System (NWPS). Bull Canyon WSA is in the central part of the Rocky Mountain Forest Province with juniper-pinyon woodland (5,520 acres) and sagebrush steppe (6,777 acres) ecosystems. The sagebrush steppe ecosystem is not represented in Colorado wilderness and the juniper-pinyon ecosystem is represented by only one small area in Colorado and only 2 small areas nationwide. Dinosaur National Monument to the north is representative of these ecosystems, and although portions are administratively endorsed for wilderness designation, they are not part of the NWPS. The landforms are more characteristic of the Colorado Plateau than the Rocky Mountain Forest Province. (See Table 2)

Table 2 -Ecosystem Representation

<u>Bailey-Kuchler Classification</u>	NWPS Areas		Other BLM Studies	
Province/Potential Natural Vegetation	<u>areas acres</u>		<u>areas acres</u>	
<i>Nationwide</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper/Pinyon Woodland	2	41,451	22	167,864
Sagebrush Steppe	4	76,129	22	241,526
<i>Colorado</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper/Pinyon Woodland	1	11,181	16	119,424
Sagebrush Steppe	0	0	9	31,960

Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers

The Bull Canyon WSA is within a day's drive of 2 major population centers in Utah and within 6-1/2

hours drive from Denver, Colorado. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a 5-hour drive of the population centers.

Table 3 - Wilderness Opportunities for Residents of Major Population Centers

<u>Population Center</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
Salt Lake City/Ogden	11	685,088	42	1,826,904
Provo - Orem	12	730,088	52	2,307,031

Balancing the geographic distribution of wilderness areas

The Bull Canyon WSA would contribute to balancing the geographic distribution of areas within the National Wilderness Preservation System (NWPS). The nearest designated wilderness is the High Uintas wilderness (460,000 acres) some 70 miles to the northwest in Utah. However, the landforms and ecosystems are different than those found in the Bull Canyon WSA. Part of Dinosaur National Monument to the north of the WSA has been administratively endorsed for wilderness designation but is not part of the NWPS. The Willow Creek and Skull Creek WSAs are recommended for wilderness designation and are immediately to the east, the Daniels Canyon WSA (2,495 acres adjacent to Dinosaur National Monument in Utah) some 10 miles to the northwest is not recommended for wilderness and an additional 10 study areas are within 2 to 3 hours of Bull Canyon. Four of the 13 WSAs in the region are recommended for wilderness designation. The Bull Canyon WSA is accessible year-round and expands opportunities to attain diverse wilderness experiences.

MANAGEABILITY

The recommended area can be effectively managed to preserve its wilderness character. The boundaries have been adjusted to include enough area to enhance and insure manageability. See the recommendation and rationale section for a discussion of these boundary adjustments.

A developed campground is proposed to be located adjacent to the Plug Hat Rock Picnic Area. The site is well screened from the recommended area by vegetation and topography and is located outside of the recommended boundary.

The 320-acre private inholding in the center of the WSA (see map) is currently managed in a manner consistent with wilderness objectives; however, such management is subject to change at the discretion of the owner. BLM has concluded that the area is presently manageable as wilderness in spite of this concern. Possible exchange or acquisition of this land is currently being negotiated in order to ensure future compatible management.

The State School Trust Lands identified for acquisition (1,535 acres) would further enhance the manageability of the area. (See Map) The blocked configuration of the area enhances management by providing identifiable boundaries.

Existing range improvements consisting of 2 developed springs with watering troughs, 7 stock ponds, and approximately 3.5 miles of fence would continue to be maintained by the grazing permittees with the use of motorized vehicles, only if necessary. No new range improvements are proposed.

All subsurface minerals within the WSA are under federal ownership except for the 320-acre private inholding. The Bureau of Land Management is currently pursuing acquisition of the mineral

rights for the inholding. There are no mining claims or leases that would encumber management of the recommended area.

ENERGY AND MINERAL RESOURCE VALUES

The Bull Canyon WSA energy and mineral values were evaluated in *Mineral Resources of the Bull Canyon Wilderness Study Area, Moffat County, Colorado, and Uinta County, Utah, U.S. Geological Survey Bulletin 1714* (1987).

The WSA has no identified resources and a low mineral resource potential for undiscovered mineral resources including all metals, uranium, and oil and gas.

No mines, prospects, or other mineral-related workings are found in or within 2 miles of the WSA. The Glen Canyon Sandstone which outcrops in the WSA is suitable for use as foundry sand, fracturing sand, and abrasive sand. However, there is currently no local market for these common materials and high transportation costs preclude long distance shipment of the material. This resource is readily available elsewhere.

No metallic mineral occurrences were identified at the ground surface and geochemical samples

contained no anomalous concentrations of any metals. Therefore, the mineral resource potential is low for all metallic minerals as well as uranium.

The study area has low mineral resource potential for oil and gas. The Middle Pennsylvanian (about 330 to 290 million years old) Weber Sandstone may be present beneath the WSA, but its oil and gas potential is unknown. Most of the oil at the Rangely oil field 12 miles to the southeast, was produced from the Weber. Since the USGS report was filed, information updated by BLM reveals that the density and distribution of the 60 plus shallow drill holes in the vicinity of the WSA, lack of production, negative test results, published analysis of the subthrust play and petroleum potential, and paucity of recent drilling activity suggest that the likelihood of the WSA to contain economic oil and gas deposits is minimal. The area is not prospectively valuable for any other mineral resource.

IMPACTS ON RESOURCES

The following comparative impact table (Table 4) summarizes the effects on pertinent resources for the 3 alternatives considered for this WSA.

Table 4 - Comparative Summary of the Impacts by Alternative

Impact Topics	Recommendation: Boundary Adjustment	All Wilderness Alternative	No Wilderness Alternative
<i>Impacts on Wilderness Characteristics</i>	<i>Opportunities for solitude, primitive and unconfined recreation, high scenic quality, and the naturalness of the area would be protected on 13,700 acres.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, high scenic quality, and the naturalness of the area would be protected on 12,197 acres.</i>	<i>The Wilderness characteristics of solitude and naturalness would be lost from approximately 8,000 acres of the WSA through combined effects of projected activities.</i>

Table 4 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: Boundary Adjustment Alternative	All Wilderness Alternative	No Wilderness Alternative
<i>Impacts on Ranching Operations</i>	<i>Livestock forage production within the proposed area would remain at current levels of 920 AUMs and would remain at the current level of 826 AUMs within the WSA. Operating costs on grazing allotments within the WSA would be slightly higher where livestock operations could be accomplished reasonably without the use of vehicles.</i>	<i>Livestock production within the Bull Canyon WSA would remain at 826 AUMs. Operating costs on grazing allotments within the WSA would be slightly higher where livestock operations could be accomplished reasonably without the use of vehicles.</i>	<i>Livestock forage production would increase by about 18 percent of 150 AUMs to a total of 976 AUMs. Operating costs associated with range improvement projects would remain at current levels because vehicle use would be allowed.</i>
<i>Impacts on Recreation Use and Quality</i>	<i>Recreation use levels in the proposed wilderness area are expected to increase from 700 visitor days to 850 days per year. Opportunities for primitive and unconfined recreation would remain unchanged in a natural setting.</i>	<i>Recreation levels in the proposed wilderness area are expected to increase from 700 visitor days to 850 visitor days per year. Opportunities for primitive and unconfined recreation would remain unchanged in a natural setting.</i>	<i>Recreation use would increase from 700 to 850 visitor days per year. Primitive recreation opportunities would be degraded by the development of other resources.</i>
<i>Impacts on Water Quality</i>	<i>Since no surface-disturbing activities would occur under the proposed action, there would be no change or impact to water quality.</i>	<i>Since no surface-disturbing activities would occur under the proposed action, there would be change or impact to water quality.</i>	<i>There would be an increase in sediment yield of up to 20 percent from the WSA in the short term, although there would probably be a long-term decrease of about 3 percent. The change in salts would be about half that of sediment. This would be an immeasurably small short-term contribution to, or long-term decrease in, sediment and salts in the White River. The long-term changes are well within the natural variation of up to 25 percent.</i>

Table 4 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: Boundary Adjustment Alternative	All Wilderness Alternative	No Wilderness Alternative
<i>Impacts on Big Game Species (Populations and Habitat) and Eagles</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of 170 deer, 10 elk, and 2 pair of golden eagles would remain unchanged.</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of 170 deer, 10 elk, and 2 pair of golden eagles would remain unchanged.</i>	<i>There would be an increase of about 15 deer (to a total of 185) and 2 elk (to a total of approximately 12) currently using the WSA. No impacts to golden eagles or other raptors are anticipated because they would be protected.</i>
<i>Impacts on Mineral Exploration and Production</i>	<i>The area (13,700 acres) would be closed to mineral entry. The low potential for exploration and development of oil and gas would be precluded. No subsurface geologic data would be gained.</i>	<i>The area (12,297 acres) would be closed to mineral entry. The low potential for exploration and development of oil and gas would be precluded. No subsurface geologic data would be gained.</i>	<i>The area (12,297 acres) would be open to leasing, exploration, and development; geologic knowledge of the area would be increased. The low potential of the WSA for oil and gas production or development could be realized. No production or development is projected, however.</i>
<i>Impacts on Private Lands</i>	<i>Acquisition of the adjoining state lands and the 320 acres of private land would be pursued. Current grazing and wildlife habitat uses of these lands would continue.</i>	<i>Acquisition of the adjoining state lands and the 320 acres of private land would be pursued. Current grazing and wildlife habitat uses of these lands would continue.</i>	<i>No impact or change in ownership of the 320 acres of private land or on adjacent state land is anticipated. Grazing and wildlife habitat uses of these lands would continue.</i>

LOCAL SOCIAL AND ECONOMIC CONSIDERATIONS

Designation of the Bull Canyon WSA as wilderness would incrementally help to increase long-term recreation use in the Dinosaur area. Greater public awareness and publicity of the area would also draw wilderness users from outside northwest Colorado. Recreation use of the area is projected to increase from 700 to 850 visitor days or more. This increase in recreation use would generate some long-term increase in local income and although not large, could be noticed in the smaller communities in the area such as Dinosaur. These economic benefits to smaller communities could be even more noticeable if all the areas proposed for wilderness in the northwest part of Colorado became wilderness. Social factors were not considered a significant issue in the study.

SUMMARY OF WSA SPECIFIC PUBLIC COMMENTS

Public involvement has occurred throughout the wilderness review process. Certain comments reviewed during the inventory process and early stages of the Draft Environmental Impact Statement (EIS) were used to develop significant study issues and various alternatives for the ultimate management of those lands with wilderness values.

During formal public review of the Draft EIS, a total of 170 comments were received which specifically addressed this WSA (114 written and 56 oral). In general, 147 comments (86 percent) supported wilderness designation and 17 (10 percent) favored releasing

the area for other uses (no wilderness). Six commentors (4 percent) gave no recommendation.

Those favoring wilderness designation generally commented on the outstanding wilderness and scenic values of the WSA as well as preservation of riparian and wildlife habitat. Many of the commentors have visited the area and support the boundary adjustment alternative. Some commented on preservation of biological diversity of the area and the outstanding recreation opportunities within the area.

Several comments focused on perceived overgrazing by livestock as seen through increased erosion and degradation of riparian areas. Many also stated that water rights information was lacking in the Draft EIS and should be included as an issue.

Those opposing wilderness designation generally feel that there is enough or too much designated wilderness now and favor other uses for the WSA. Some oppose the restrictions on other uses imposed by wilderness designation.

The National Park Service (Dinosaur National Monument) supports wilderness designation for the Bull Canyon area. The Colorado Oil and Gas Conservation Commission favors nonwilderness for Bull Canyon in order to keep the area open to potential oil and gas exploration. No other federal, state, or local agencies gave WSA specific comments.

Table 5
Estimated Cost of Acquisition of Non Federal Holdings
Within Areas Recommended for Designation 1/

<u>Legal Description</u>	<u>Total Acreage</u>	<u>Number of Owners <u>2/</u></u>	<u>Type of Ownership By Estate</u>		<u>Presently Proposed for Acquisition</u>	<u>Preferred Method of Acquisition</u>	<u>Estimated Cost of Acquisition <u>3/</u></u>	
			<u>Surface Estate</u>	<u>Subsurface Estate</u>			<u>Land Costs</u>	<u>Processing Costs</u>
T.4N.,R.104W.Sec 13 S1/2S1/2 Sec 24 N1/2N1/2	320	4	Private	Private	Yes	Purchase	\$ 8,000	\$30,000
T.4N.,R.103W.Sec 16	640	1	State	State	Yes	Exchange	N/A	\$8,000
T.4N.,R.104W.Sec 36	630	1	State	State	Yes	Exchange	N/A	\$8,000
T.5N.,R.104W.Sec 36 S1/2	265	1	State	State	Yes	Exchange	N/A	\$8,000

1/Standard Disclaimer: the estimated costs listed in this appendix in no way represents a formal appraisal value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estate with similar characteristics to those within the WSA. The estimates are for the purpose of establishing a range of potential costs to the government of acquiring non-federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in the appendix.

Processing costs are all miscellaneous expenses other than land costs including work month costs, appraisals, title work, escrow tests, etc.

2/If a larger parcel as shown in the first column has been recently subdivided or is jointly owned, this column represents the number of owners that could be involved in any acquisition negotiation.

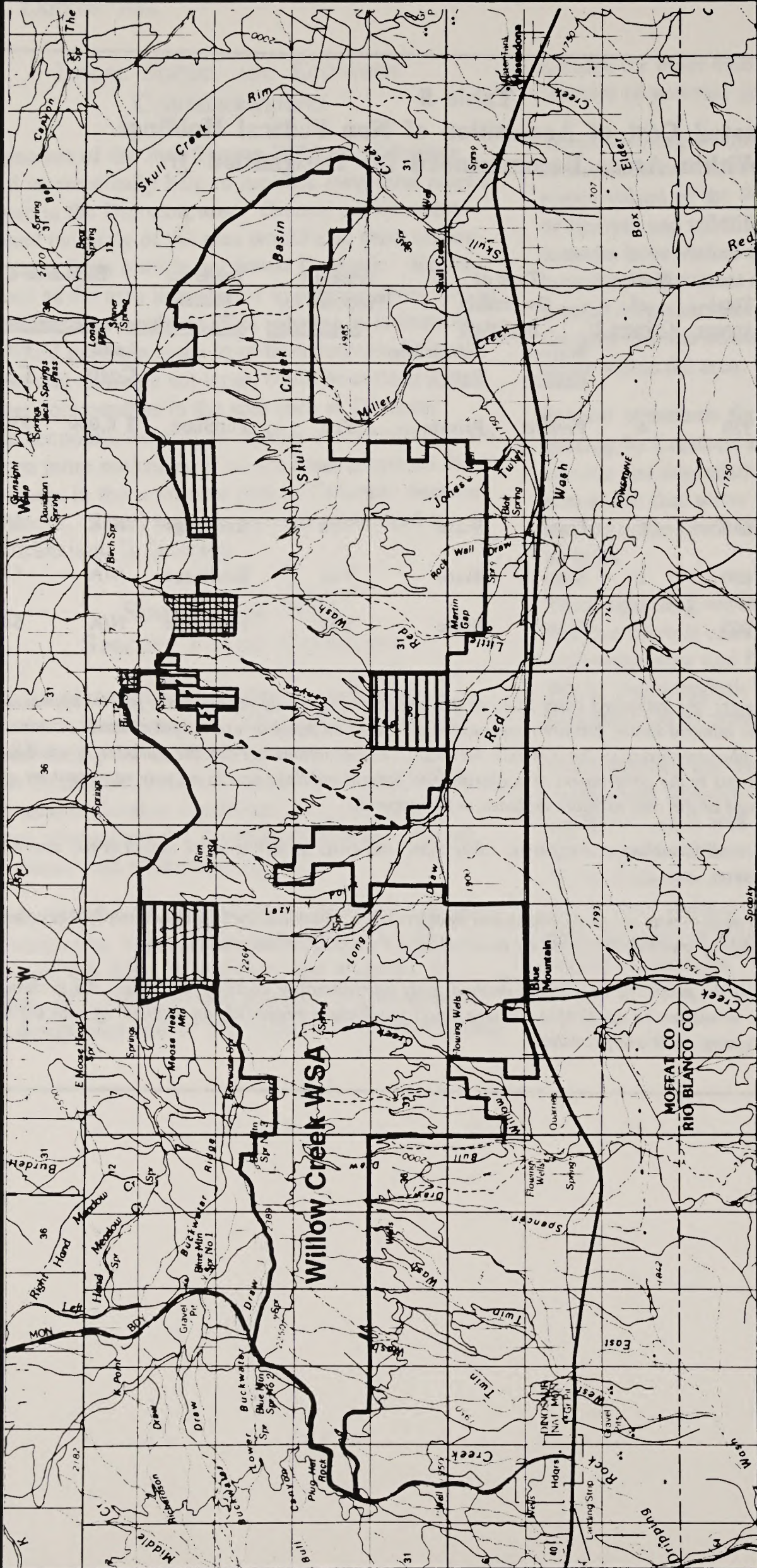
3/Where exchange is the proposed acquisition method, only administrative costs of processing the exchange are shown. Land costs would not be applicable. Where direct purchase is proposed, an estimate of both the land costs and the processing costs are provided.

T 5 N

T 4 N

T 4 N

T 3 N



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RECOMMENDED FOR WILDERNESS



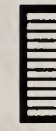
LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS.



STATE



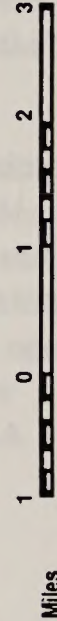
RECOMMENDED FOR NONWILDERNESS (None)



SPLIT ESTATE



PRIVATE (None)



Willow Creek And Skull Creek WSA

Proposal

CO-010- 002/CO-010-003

January 1991

WILLOW CREEK WILDERNESS STUDY AREA

The Study Area--13,368 acres

The Willow Creek WSA (CO-010-002) is located in Moffat County approximately 5 miles northeast of Dinosaur, Colorado and approximately 8 miles south of Dinosaur National Monument. The WSA contains 13,368 acres of BLM lands with 94 acres of split estate (BLM surface, private mineral estate) on the northeastern boundary. There are no other inholdings although 3 sections of state school lands adjoin the WSA. The northern boundary is defined by primitive roads and ways with scattered parcels of undeveloped public, private, and state lands. The east boundary is a primitive road no longer in use which is rehabilitating. This eastern boundary is shared with Skull Creek WSA. The southern boundary is determined by state and private lands and section lines through undeveloped BLM land. The scattered private and state lands to the north are generally undeveloped with scattered oil and gas exploration. There is one residence outside the WSA along the southern boundary. The area is shown on the map.

The study area is more characteristic of the scenic, arid canyon ecosystems found in the Colorado Plateau rather than the Rocky Mountain forest province ecoregion in which this WSA is located. Pinyon, juniper, sagebrush, saltbush, native grasses and forbs are the main vegetation communities. Riparian vegetation found in various drainages includes boxelder, cottonwood, and willows. The riparian vegetation within the Willow Creek drainage is especially dense and lush. (See Photo 1)

The upper end of Willow Creek ends in a spectacular box canyon with a 200-foot waterfall which flows in early spring.

Geographically, the area generally lies within the Skull Creek Basin. The area is cut by steep, colorful ridges, hogbacks, deep gullies, and canyons of sandstone eroded by rain and snowmelt waters. A 1,000-foot cliff dominates the north end of the Willow Creek WSA. (See Photo 2)

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Craig District Final Wilderness Environmental Impact Statement published November 5, 1990. Four alternatives were analyzed for the WSA in the EIS: combined all wilderness (27,553 acres recommended for wilderness designation; the result of combining the Willow Creek and Skull Creek WSAs and adding 445 acres from outside the WSAs) which is the recommendation of this report; conflict resolution (19,698 acres recommended and 7,410 acres not recommended within the Willow Creek and Skull Creek WSAs); all wilderness (13,368 acres); and no wilderness.

Recommendation and Rationale

13,503 acres recommended for wilderness

0 acres recommended for nonwilderness

The recommendation is to combine the Willow Creek and Skull Creek WSAs into one wilderness area of 27,553 acres. These two WSAs complement each other. An abandoned, primitive road which formed the original boundary of the 2 WSAs is no longer used and is capable of returning to a natural condition which is substantially unnoticeable in the area as a whole. The recommended area is shown on the map. This is also the environmentally preferable alternative since the least change in the natural environment would result over the long term.

The addition of 135 acres of public land in 2 parcels along the northern boundary (445 acres within the combined area) as well as the proposed addition of approximately 650 acres of adjacent state school trust lands (1,590 acres with the combined area) would block the area, enhance unconfined recreation and solitude and enhance the manageability of the area. (See Map) These additions are within critical habitat for elk because of the scarcity of summer range within the Colorado Division of Wildlife Data Analysis Unit E-21.

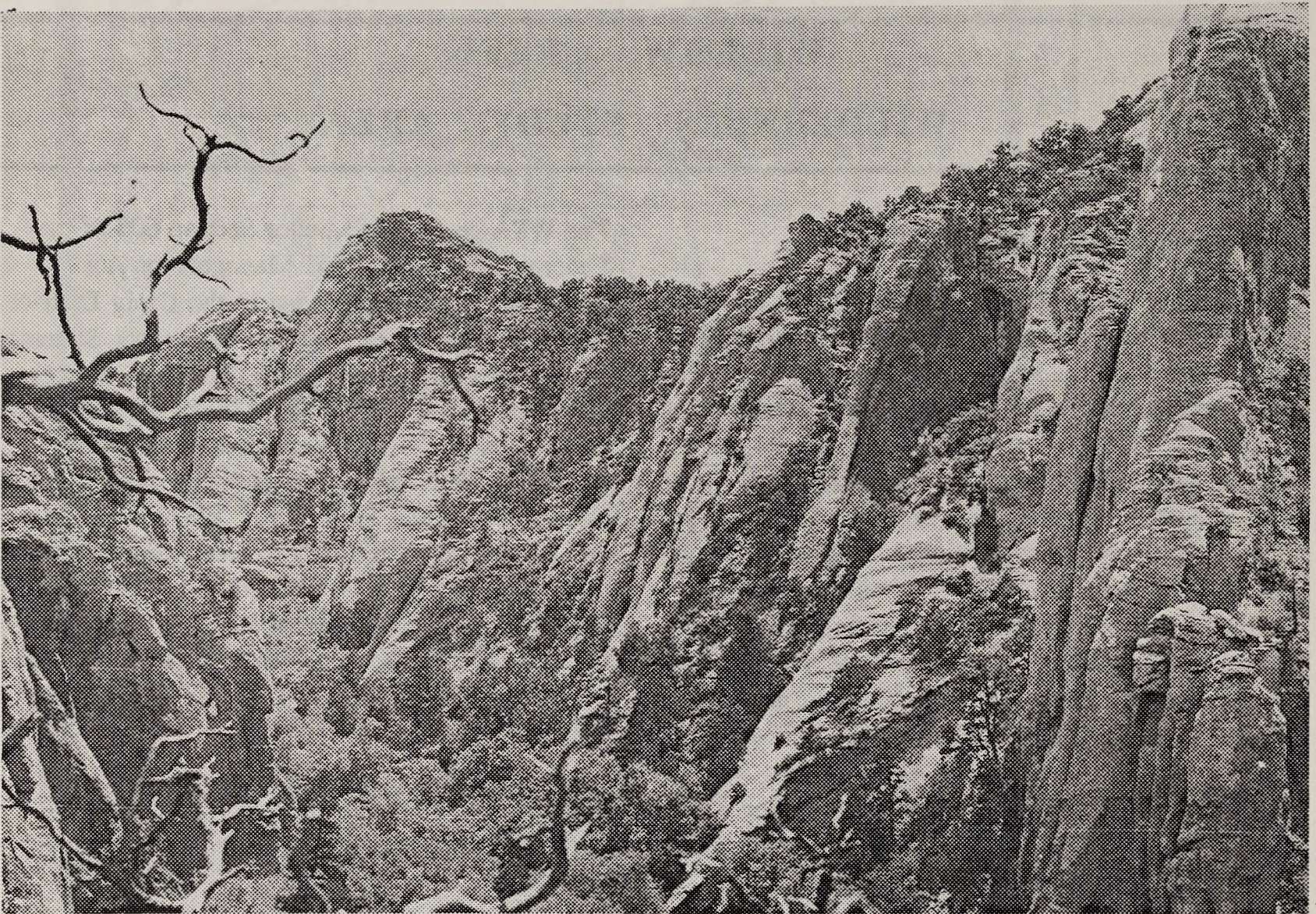


Photo 1. Willow Creek WSA. Steep and rugged Willow Creek Canyon.

The area is recommended for wilderness because of its outstanding scenery and opportunities for solitude and primitive and unconfined recreation and the presence of special features. The colorful cliffs, numerous canyons, ridges, and rock formations throughout the area provide outstanding scenery and interesting slickrock and canyon hiking and climbing areas. (See Photo 3) In addition, the area contains some of the oldest pinyon pine trees known as well as numerous and significant archaeological resources dating back 10,000 years.

The area is accessible year-round from U.S. Highway 40, however, access into other portions of the area should be pursued to enhance opportunities for recreation pursuits. The WSA is within a 4 to 5 hour drive of the Salt Lake City/Ogden and Provo/Orem, Utah metropolitan areas and about 6 hours from Denver, Colorado. The WSA generally provides different landforms and ecosystems than existing designated areas, thus providing expanded opportunities for diverse wilderness experiences and providing protection for biologically diverse areas.

Designation of the Combined Willow Creek and Skull Creek WSAs as wilderness would preserve an undeveloped unroaded area with outstanding wilderness qualities. The 2 WSAs complement each other. The recommended area is more representative of the Colorado Plateau region than the Rocky Mountain Forest Province ecoregion in which this WSA is located. Plant life is diverse with species ranging from sagebrush, saltbush, and native grass communities to old growth pinyon-juniper woodlands and dense riparian communities in drainages. Designation of the area would preserve valuable wildlife habitat for big game, birds of prey and many other species.

No major manageability problems or resource conflicts would result from wilderness designation. No range improvement projects are proposed and no conflicts with range management are expected. The WSA contains portions of 3 grazing allotments totaling an estimated 812 animal unit months (AUM). Oil and gas potential in the area is considered to be low according to the U.S. Geological Survey and Bureau of Mines report for the area.

There are no mining claims and the WSA is not considered prospectively valuable for any mineral resources. The 280 acres of private mineral estate

in the recommended area (94 acres in the Willow Creek WSA) are proposed for acquisition.

Table 1 - Land Status and Acreage Summary of the Study Area

<u>Within Wilderness Study Area</u>	<u>Acres</u>
BLM (surface and subsurface)	13,274
Split estate (BLM surface only)	94
Inholdings (state, private)	<u>0</u>
Total	13,368
<u>Within the Recommended Wilderness Boundary</u>	
BLM (within WSA)	13,274
BLM (outside WSA)	135
Split Estate (within WSA)	<u>94</u>
Total BLM Land Recommended for Wilderness*	13,503
Inholdings (state, private)**	650
<u>Within the Area Not Recommended for Wilderness</u>	
BLM	0
Split Estate	<u>0</u>
Total BLM Land Not Recommended for Wilderness	0
Inholdings (state, private)	0

* Total recommended for wilderness is 27,553 acres when combined with the Skull Creek proposed area

** Table 5 contains a designation of inholdings included within the recommended boundary

Criteria Considered in Developing the Wilderness Recommendation

WILDERNESS CHARACTERISTICS

Naturalness

The Willow Creek WSA is predominately natural with negligible human imprints. The area is cut by colorful ridges, hogbacks, deep gullies, and canyons of sandstone eroded by rain and snowmelt waters. A scenic 1,000 foot cliff dominates the north side of the area. The rugged dissected topography within the area is mostly covered with dense pinyon-juniper woodlands with openings of sagebrush, saltbush, greasewood, and native grass plant communities.

Riparian vegetation including boxelder, cottonwood, willows, and associated species are found in various drainages and is particularly dense and lush in scenic Willow Creek Canyon. Scattered stands of aspen

and mountain brush plant communities appear at higher elevations. Elevations in the recommended area range from 5,900 feet on the southern boundary to 8,300 feet on the northern boundary.

The WSA is habitat for mule deer and elk. Approximately 5,420 acres of the WSA is elk summer range which is considered to be critical habitat because of the scarcity of elk summer range within the Colorado Division of Wildlife Data Analysis Unit E-21. Golden eagles nest within the WSA and other raptors also occupy the area. Numerous other birds, mammals and reptiles live within the WSA.

Minor imprints of man are found within the WSA and consist of several ways and a seismic line which are revegetating, 1 earthen dam, 4 developed springs with livestock watering troughs, 1.25 miles of fence and a well with 1 mile of pipeline. All of these imprints are scattered and well screened by topography and dense vegetation to the extent that they are substantially unnoticeable within the area.



Photo 2. Willow Creek WSA. A 1,000 foot cliff dominates the northern portion of the Willow Creek WSA.

Solitude

The diverse topography and dense vegetation within the WSA provide outstanding opportunities to experience solitude. The rugged and highly dissected terrain provides excellent screening and allows the visitor to isolate themselves from others in the area. Numerous vistas and overlooks from above the northern cliffs and along ridges create a sense of open space and vastness that enhances the feeling of solitude. Combined with the relatively low visitation within the area, the opportunities for solitude are truly outstanding.

Primitive and Unconfined Recreation

Willow Creek WSA offers outstanding year-round opportunities for visitors to participate in primitive and unconfined recreational activities including hiking, backpacking, camping, hunting, sightseeing, photography, climbing, viewing wildlife and cultural sites, and horseback riding among others. The outstanding scenery, colorful, and unusual geology as well as wildlife values in the WSA contribute to a variety of outstanding primitive types of recreation opportunities and experiences. The year-round accessibility of the area contributes to these opportunities. The area is small enough to allow excellent day hikes yet large enough to accommodate multi-day trips and allow unconfined movement, especially when combined with the adjacent Skull Creek WSA.

Special Features

An overlook and a nature trail managed by the National Park Service, Dinosaur National Monument, overlook the WSA and are located on the Harpers Corner Road adjacent to the western boundary of the WSA. National Park Service statistics for 1989 indicate 105,126 visitors traveled along this route to Dinosaur National Monument.

The Willow Creek WSA is located within the boundary of the 1976 Skull Creek Environmental Study Area, a 58,626-acre area that was first recognized in 1975 as containing an interesting array of natural history resources. Cultural resources identified during the 1976 study include substantial archaeological and cultural sites dating back 10,000 years. Sites have been found with sufficient depth and unaltered surface area to provide scientific data. Some of these sites are eligible for listing on the National Register of Historic Places. Granaries and

1 walled rock shelter were located in sandstone faces. A few badly weathered pictographs and a single wickiup cluster were also found. Artifacts found in the WSA include projectile points, knives, drills, scrapers, choppers, grinding stones, pottery, and juniper bark matting. A complete cultural resource inventory has not been conducted.

Significant paleontological resources have been found in the vicinity of the WSA and may occur within the WSA.

The University of Arizona has conducted a dendrochronological analysis of wood samples from relic pinyon pine in the Skull Creek Basin (of which this WSA is a part). Their analysis showed the trees to be at or near the maximum age attainable by the species. The research provides a data base for dendrochronological reconstruction of local climate extending back 600 years. Continued research in the Willow Creek WSA is anticipated and would not affect wilderness values.

The northern portion of the recommended area (5,555 acres) is considered to be elk summer range. Because of the scarcity of summer range within the Colorado Division of Wildlife Data Analysis Unit E-21, all of this summer range is considered to be critical habitat.

DIVERSITY IN THE NATIONAL WILDERNESS PRESERVATION SYSTEM

Assessing the diversity of natural systems and features as represented by ecosystems

Wilderness designation of this WSA would add a landform and ecosystems which have little representation in the National Wilderness Preservation System (NWPS). The Willow Creek WSA is in the central part of the Rocky Mountain Forest Province with juniper-pinyon woodland (6,000 acres) and sagebrush steppe (7,368 acres) ecosystems. The sagebrush steppe ecosystem is not represented in Colorado. The juniper-pinyon woodland ecosystem is represented by 1 small designated wilderness area in Colorado and only 2 areas nationwide. Dinosaur National Monument to the north is representative of these ecosystems, and although portions are administratively endorsed for wilderness designation, they are not part of the NWPS. The landforms are more characteristic of the Colorado Plateau than the Rocky Mountain Forest Province. (See Table 2)

Table 2 - Ecosystem Representation

<u>Bailey-Kuchler Classification</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
Province/ Potential Natural Vegetation	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
<i>Nationwide</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	2	41,451	22	167,864
Sagebrush Steppe	4	76,129	22	241,526
<i>Colorado</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	1	11,181	16	119,424
Sagebrush Steppe	0	0	9	31,960

Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers

The Willow Creek WSA is within a day's drive of 2 major population centers in Utah and within 6-1/2

hours drive of Denver, Colorado. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a five hour drive of the population centers.

Table 3 -Wilderness Opportunities for Residents of Major Population Centers

<u>Population Center</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
Salt Lake City/Ogden	11	685,088	42	1,826,904
Provo/ Orem	12	730,088	52	2,307,031

Balancing the Geographic Distribution of Wilderness Areas

The Willow Creek WSA would contribute to balancing the geographic distribution of areas within the National Wilderness Preservation System. The nearest designated wilderness is the High Uintas (460,000 acres) some 80 miles to the northwest in Utah. However, the landforms and ecosystems of this wilderness area are entirely different than those found in the Willow Creek WSA. Part of Dinosaur National Monument to the north of the WSA has been administratively endorsed for wilderness des-

ignation, however, much of this area is inaccessible in winter.

The Skull Creek WSA is adjacent to Willow Creek on the east and is recommended for wilderness designation as one combined wilderness area. Bull Canyon WSA is adjacent to the west, separated by the National Park Service Harpers Corner Road, and is recommended for wilderness designation. These three areas complement each other. The Daniels Canyon WSA (2,496 acres) is located some 15 miles to the northwest in Utah but is not recommended for wilderness designation. An additional

10-study areas are within 2 to 3 hours of Willow Creek and only 2 of these WSAs are recommended for wilderness designation. The WSA is accessible year-round from U.S. Highway 40 and the Dinosaur National Monument Harpers Corner Road, thus expanding opportunities to attain diverse wilderness experiences.

MANAGEABILITY

The recommended area can be effectively managed

to preserve its wilderness character. Management is greatly enhanced when combined with the Skull Creek WSA to the east and by proposed state land acquisition and public land additions.

Potential management problems could arise in the extreme west end of the WSA which is a narrow finger of land bordered by the well traveled Harpers Corner Road to the north and a dirt road to the south. However, visitors within this area are well screened by topography and dense vegetation. The area is



Photo 3. Willow Creek WSA. Hikers in Willow Creek Canyon.

also a very important viewshed from the well traveled Harpers Corner Road and from 2 overlooks next to Plug Hat Rock. Off-highway vehicle use within this area can be managed by closing access points into the WSA.

A portion of the southern boundary is not well defined because it follows section lines and will have to be surveyed and marked. Also, exchanges or acquisition of private lands is suggested to preclude potential problems where these lands extend some 2 miles into the WSA from the south. However, this narrow finger of private land is mostly within portions of the Red Wash drainage and screened from view within the WSA by topography. Present management of this undeveloped property does not jeopardize adjacent wilderness management.

There are no other major manageability problems or resource conflicts which would result from wilderness designation. There are no mining claims or leases that would encumber management of the recommended area.

The 94 acres of private mineral estate is proposed for acquisition although no foreseeable future development is anticipated. The remainder of the subsurface minerals in the WSA are under federal ownership.

Existing range improvements consisting of one abandoned check dam, 4 developed springs with watering troughs, 1.25 miles of fence and 1 domestic water pipeline would all be reviewed through an environmental assessment (EA) and any unnecessary improvements would be phased out or removed. Maintenance of range improvements would normally occur without the use of motorized equipment but motorized vehicle use may be allowed for

grandfathered uses. No new range improvements are proposed.

ENERGY AND MINERAL RESOURCE VALUES

The Willow Creek WSA energy and mineral values were evaluated in *Mineral Resources of the Willow Creek and Skull Creek Wilderness Study Areas, Moffat County, Colorado: U.S. Geological Survey Bulletin 1717-D* (1990).

The WSA has a low resource potential for all metals, including uranium and vanadium, and oil and gas. No mineral resources were identified in the study area. Sand and gravel in the study area have no unique or special properties and no local market. Sand and gravel at other locations nearer to market is better suited for local use.

As of November 1989, no mining activity was known to be taking place within the study area. The study area is not adjacent to any established mining districts, but the area has been prospected for uranium and base metals since the 1870's.

Information collected by BLM reveals that the density and distribution of the 60 plus shallow drill holes in the vicinity of the WSA, lack of production, negative test results, published analysis of the subthrust play and petroleum potential, and paucity of recent drilling activity, all suggest the WSA does not contain economically developable oil and gas deposits. The area is not prospectively valuable for any other mineral resource.

IMPACTS ON RESOURCES

The following comparative impact table (Table 4) summarizes the effects on pertinent resources for the 4 alternatives for this WSA.

Table 4 - Comparative Summary of the Impacts by Alternative

Impact Topics	Recommendation: Combined All Wilderness Alternative	Conflict Resolution Alternative	All Wilderness Alternative	No Wilderness Alternative
<i>Impacts on Wilderness Characteristics</i>	<i>Opportunities for solitude, primitive and unconfined recreation, high scenic quality, and the naturalness of the area would be protected and increase on 27,553 acres.</i>	<i>Opportunities for solitude, primitive and unconfined recreation and the naturalness of the area would be protected on 19,698 acres and lost on 7,410 acres.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, high scenic quality and the naturalness of the area would be protected on 13,368 acres.</i>	<i>The wilderness values of naturalness and solitude would be lost on about one-third of the WSA (approximately 4,500 acres) due to the combined effects of protected activities.</i>
<i>Impacts on Ranching Operations</i>	<i>Livestock forage production within the combined Willow Creek/Skull Creek wilderness would remain at current levels of 1,354 AUMs per year within the proposed area (1,339 AUMs within the WSA's). Due to restrictions on vehicle use, operating costs would be slightly higher.</i>	<i>Livestock forage production within the designated wilderness would remain at current levels of 973 AUMs per year. Operating costs on grazing allotments within the wilderness area would be slightly higher due to restrictions on vehicle use. Available AUMs within the areas not designated as wilderness (1,339 currently within the WSAs) would increase by 124 due to proposed range improvement projects. There would be a net increase of 124 AUMs (from 1,339 AUMs to 1,463 AUMs).</i>	<i>Livestock forage production within the Willow Creek WSA would remain at the current level of 812 AUMs. Operating costs on grazing allotments would be slightly higher due to restrictions on vehicle use.</i>	<i>Livestock forage production would remain at current levels of 812 AUMs.</i>

Table 4 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: Combined All Wilderness Alternative	Conflict Resolution Alternative	All Wilderness Alternative	No Wilderness Alternative
<i>Impacts on Recreation Use and Quality</i>	<i>Recreation use levels are expected to increase from 600 to 900 visitor days per year for nonhunting and nonmotorized forms of recreation. Hunting use levels would remain at 800 visitor days per year. Recreation use would total 1,700 visitor days per year. Opportunities for primitive recreation would be protected on 27,533 acres.</i>	<i>Recreation use levels within the designated area are expected to increase from 600 to 900 visitor days per year for nonhunting and nonmotorized forms of recreations. Hunting use levels are expected to remain at 800 visitor days per year. Recreation use would total 1,700 visitor days per year. Opportunities for primitive and unconfined recreation would be lost on 7,410 acres. Development in the 2,430 acres not recommended as wilderness in the Willow Creek WSA would contribute to a loss of scenic quality.</i>	<i>Nonmotorized recreation use levels in the proposed wilderness would increase from 700 visitor days to 850 days per year consisting of about 400 hunting and 450 other recreation visitor days per year. Off-road vehicle use would be prohibited. Opportunities for primitive and unconfined recreation would remain unchanged in a natural setting.</i>	<i>Total recreation use levels would increase from 700 visitor days per year to 850 visitor days per year. Off-road vehicle use associated with hunting is expected to increase to about 75 visitor days per year.</i>
<i>Impacts on Water Quality</i>	<i>Since no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>	<i>There would be a short term (about 3 years) increase in sediment yield and contribution of salts of up to 15 percent from the combined WSAs, although there would probably be a long-term decrease of about 1.5 percent. This would be an immeasurable small short-term contribution to, or long-term decrease in sediment and salts in the White River. These changes are well within the natural variation of up to 25 percent.</i>	<i>Since no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>	<i>No noticeable increase in sediment yield and contribution of salts from the WSA would result. This would be immeasurably small contribution to the White River, and is well within the natural variation of up to 25 percent per year.</i>

Table 4 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: Combined All Wilderness Alternative	Conflict Resolution Alternative	All Wilderness Alternative	No Wilderness Alternative
Impacts on Big Game Species (Populations and Habitat) and Eagles	<i>Habitat would remain in present conditions. Animal numbers of approximately 380 deer and 60 elk, and 5 pair of golden eagles would remain unchanged.</i>	<i>For both WSAs as a whole, there would be an overall increase in use of about 7 deer and 2 elk from present levels of approximately 380 and 60 respectively. No impacts to golden eagles or other raptors would occur.</i>	<i>Habitat would be maintained in its present condition. Animal numbers of approximately 190 deer, 50 elk, and 2 pair of golden eagles would remain unchanged.</i>	<i>Habitat would be maintained in its present condition. Animal numbers of approximately 190 deer, 50 elk, and 2 pair of golden eagles would remain unchanged.</i>
Impacts on Mineral Exploration and Production	<i>The area (27,553 acres) would be closed to mineral entry and low potential oil and gas exploration and development would be precluded. No subsurface geologic data would be gathered within the WSAs.</i>	<i>The areas recommended for wilderness (19,698 acres) would be closed to mining claims and leasing and low potential oil and gas development would be precluded. No subsurface geologic data would be gathered within these areas. Low potential oil and gas exploration and development could be realized in those portions not recommended for wilderness (7,410 acres). However, No production or development is projected.</i>	<i>The WSA (13,368 acres) would be closed to mineral entry and the low potential oil and gas exploration would be precluded. No subsurface geologic data would be gathered within the WSA.</i>	<i>The area (13,368 acres) would be open to leasing, exploration and development; the low potential oil and gas exploration and development could be realized. No production or development is projected, however.</i>
Impacts on Private Lands	<i>Acquisition of portions of adjoining state lands and 280 acres of private mineral estate would be pursued, but current uses of the land would continue.</i>	<i>Acquisition of portions of adjoining state lands and 280 acres of private mineral estate would be pursued, but current uses of the land would continue.</i>	<i>Acquisition of a portion of adjoining state land and 94 acres of private mineral estate would be pursued. Current uses of the land would continue.</i>	<i>No impact or change in ownership is anticipated for state or private lands in the area. Current use of the land would continue.</i>

LOCAL SOCIAL AND ECONOMIC CONSIDERATIONS

Designation of the Willow Creek WSA as wilderness would incrementally help to increase long-term recreation use in the Dinosaur area. Greater public awareness and publicity of the area would also draw wilderness users from outside northwest Colorado. Recreation use of the area is projected to increase from 700 to 850 visitor days or more. This increase in recreation use would generate some long-term increase in local income and although not large, could be noticed in smaller communities in the area such as Dinosaur. These economic benefits to smaller communities could be even more noticeable if all the areas proposed for wilderness in the northwest part of Colorado became designated wilderness. Social factors were not considered a significant issue in the study.

SUMMARY OF WSA SPECIFIC PUBLIC COMMENTS

Public involvement has occurred throughout the wilderness review process. Certain comments reviewed during the inventory process and early stages of the Draft EIS were used to develop significant study issues and various alternatives for the ultimate management of those lands with wilderness values.

During formal public review of the Draft Environmental Impact Statement, a total of 169 comments (53 oral and 116 written) were received which specifically addressed this WSA. In general 148

comments (88 percent) supported wilderness designation and 16 (9 percent) favored releasing the area for other uses (no wilderness). Seven commenters (3 percent) gave no recommendation.

Specific comments by those favoring wilderness designation generally focused on the outstanding wilderness values, protection of wildlife habitat and biological diversity. A large number of commenters support combining the Willow Creek and Skull Creek WSAs into one designated wilderness area. Several commented on a need for increased access to the area while others said access was adequate. Several commenters stated that the area should be expanded to include BLM lands outside the WSA and support the acquisition of adjacent state lands and private mineral estate. Some commenters noted a lack of good range management was causing some deterioration of natural qualities as seen through erosion in stream channels and degradation of riparian areas.

Those opposing wilderness designation generally feel that there is enough or too much designated wilderness now and favor other uses for the WSA. Some oppose the restrictions on other uses imposed by wilderness designation.

The National Park Service supports wilderness designation of the Willow Creek WSA. The Colorado Oil and Gas Conservation Commission favors nonwilderness for Willow Creek in order to keep the area open to potential oil and gas exploration. No other federal, state, or local agencies gave WSA specific comments.

Table 5
Estimated Cost of Acquisition of Non Federal Holdings
Within Areas Recommended for Designation 1/

<u>Legal Description</u>	<u>Total Acreage</u>	<u>Number of Owners <u>2/</u></u>	<u>Type of Ownership By Estate</u>		<u>Presently Proposed for Acquisition</u>	<u>Preferred Method of Acquisition</u>	<u>Estimated Cost of Acquisition <u>3/</u></u>	
			<u>Surface Estate</u>	<u>Subsurface Estate</u>			<u>Land Costs</u>	<u>Processing Costs</u>
T.4N.,R.102W.Sec 16	650	1	State	State	Yes	Exchange	NA	\$8,000

1/Standard Disclaimer: the estimated costs listed in this appendix in no way represents a formal appraisal value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estate with similar characteristics to those within the WSA. The estimates are for the purpose of establishing a range of potential costs to the government of acquiring non-federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in the appendix.

Processing costs are all miscellaneous expenses other than land costs including work month costs, appraisals, title work, escrow tests, etc.

2/If a larger parcel as shown in the first column has been recently subdivided or is jointly owned, this column represents the number of owners that could be involved in any acquisition negotiation.

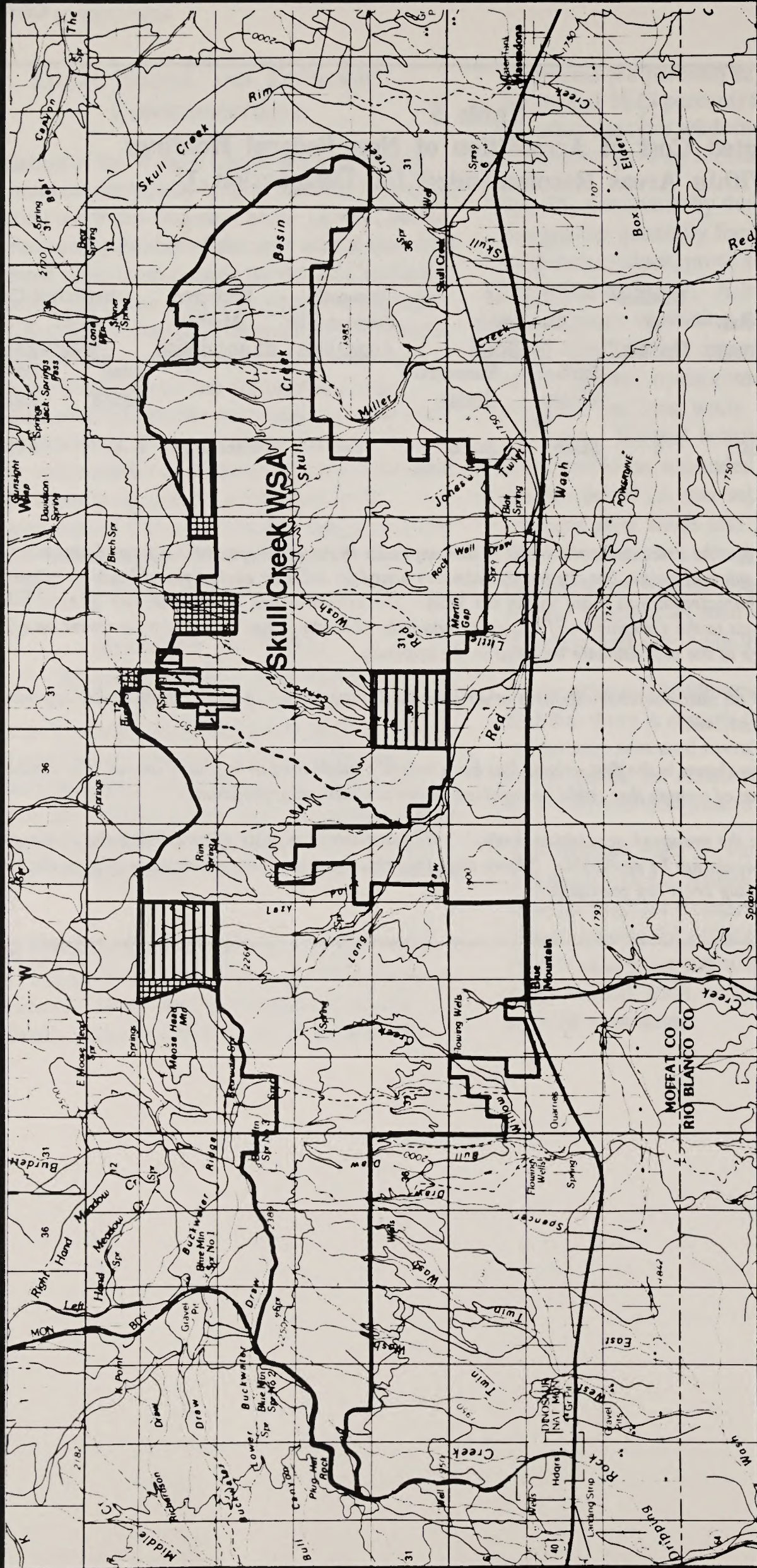
3/Where exchange is the proposed acquisition method, only administrative costs of processing the exchange are shown. Land costs would not be applicable. Where direct purchase is proposed, an estimate of both the land costs and the processing costs are provided.

T 5 N

T 4 N

T 4 N

T 3 N



R 103 W

R 102 W

R 102 W

R 101 W

R 101 W

R 100 W



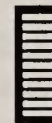
RECOMMENDED FOR
WILDERNESS



RECOMMENDED FOR
NONWILDERNESS (None)



LAND OUTSIDE WSA
RECOMMENDED FOR WILDERNESS.



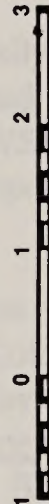
SPLIT ESTATE



STATE



PRIVATE (None)



Miles

Willow Creek And Skull Creek WSA

Proposal

CO-010- 002/CO-010-003

January 1991

SKULL CREEK

WILDERNESS STUDY AREA

The Study Area -- 13,740 acres

The Skull Creek WSA (CO-010-003) is located in Moffat County approximately 10 miles east of Dinosaur, Colorado, and approximately 9 miles south of Dinosaur National Monument. The WSA contains 13,740 acres of BLM land with 186 acres of split estate (private mineral estate, BLM surface) on the northwestern boundary. There are no other inholdings although 2 sections of undeveloped state school trust lands adjoin the WSA.

The northern boundary is defined by a way, with undeveloped state, private and BLM lands; the northeast and eastern boundary by a county road; the southern boundary by undeveloped private and state lands and the western boundary by an abandoned primitive road. The western boundary is shared with the Willow Creek WSA. The surrounding area is mostly undeveloped land with one private residence adjacent to the southeast corner of the WSA. The area is shown on the map.

The study area is more characteristic of the scenic, arid canyon ecosystems found in the Colorado Plateau rather than the Rocky Mountain Forest Province in which the WSA is located. Dense pinyon-juniper woodlands with sagebrush openings and native grasses are the main vegetation communities. Small areas at lower elevation contain a saltbush/greasewood community.

Geographically, the area lies in the center of the Skull Creek Basin and is bordered by the Skull Creek Rim (outside the WSA) which is a colorful red, 800 foot high ridge running in a semicircle to the east and north. The area is bordered on the south (inside and outside the WSA) by 200 to 500 foot high hogbacks. The WSA contains scenic, colorful ridges, deep gullies, and canyons of sandstone eroded by rain and snowmelt water with slick rock formations throughout the WSA. (See Photos 1 and 2) Numerous "potholes" in the WSA hold water used by wildlife. The area contains numerous archaeological sites dating back some 10,000 years.

(See Photo 3) The area also contains some of the oldest known pinyon pine trees.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Craig District Final Wilderness Environmental Impact Statement (EIS) published November 5, 1990. Four alternatives were analyzed in the EIS. The combined all wilderness alternative recommends 27,553 acres for wilderness designation; the result of combining the Willow Creek and Skull Creek WSAs and adding 445 acres outside the WSAs. The conflict resolution alternative (19,698 acres) recommended for wilderness designation in combination with the Willow Creek WSA), the all wilderness alternative (13,740 acres), and the no wilderness alternative were also considered.

Recommendation and Rationale

14,050 acres recommended for wilderness

0 acres recommended for nonwilderness.

The recommendation is to combine the Skull Creek and Willow Creek WSAs into one wilderness area of 27,553 acres. These 2 WSAs complement each other. An abandoned primitive road which formed the original boundary between the 2 WSAs is no longer in use and is capable of returning to a natural condition which is substantially unnoticeable in the area as a whole. The recommended area is shown on the map. This is also the environmentally preferable alternative since the least change in the natural environment would result over the long term.

The recommendation is to add 310 acres of public land in 2 parcels along the northern boundary (445 acres within the combined area) and to add approximately 940 acres of state school trust lands (1,590 acres within the combined area) to the original WSA. (See Map 1) These additions would block the area, enhance unconfined recreation and solitude as well as enhance the management of the area.



Photo 1. Skull Creek WSA. Little Red Wash in Skull Creek WSA.

The area is recommended for wilderness because of its outstanding scenery and opportunities for solitude and primitive and unconfined recreation and the presence of special features. The interesting slick rock outcrops, colorful ridges, deep gullies and canyons throughout the area provide outstanding primitive recreation opportunities such as hiking and climbing. In addition, the area contains some of the oldest pinyon pine trees known as well as numerous and significant archaeological resources dating back 10,000 years.

The area is generally accessible via county road through most of the year, however, access should be improved to enhance opportunities for recreation pursuits. The area is within a 4 to 5 hour drive of the Salt Lake City/Ogden and Provo/Orem, Utah

metropolitan areas and about 6 hours from Denver, Colorado. The WSA generally provides different landforms and ecosystems than existing designated areas, thus providing protection for biologically diverse areas.

Designation of the combined Skull Creek and Willow Creek WSAs as wilderness would preserve an undeveloped, unroaded area with outstanding wilderness qualities. The area is more representative of the Colorado Plateau than the Rocky Mountain Forest physiographic region in which this WSA is located. Plant life is diverse and designation would preserve valuable wildlife habitat for big game, birds of prey, and many other species as yet uninventoried.

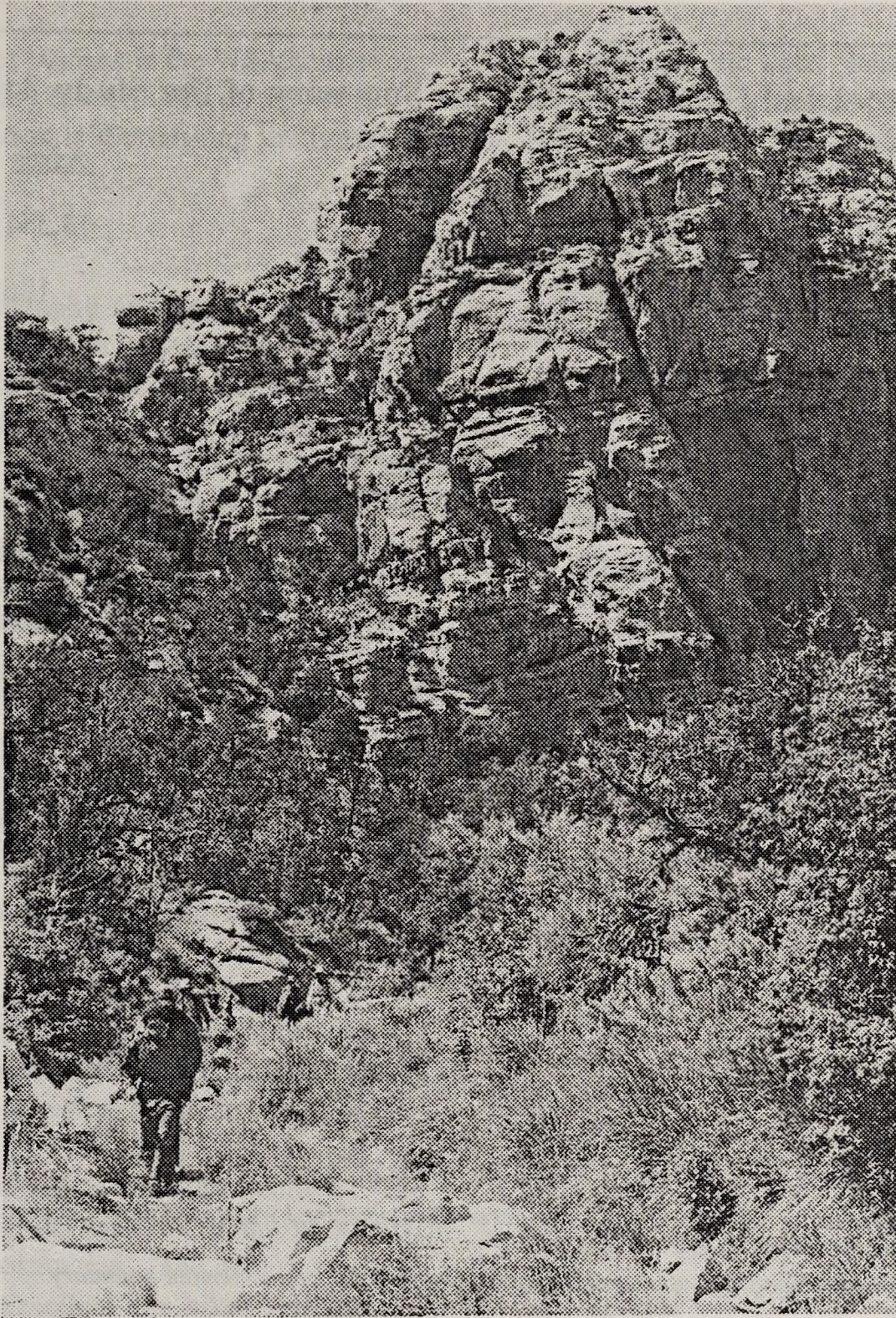


Photo 2. Skull Creek WSA. Hikers in Box Canyon.

No major manageability problems or resource conflicts would result from wilderness designation. The Skull Creek WSA contains portions of 4 livestock grazing allotments with an estimated 527 Animal Unit Months (AUMs) of livestock forage. There are no range improvements in the Skull Creek WSA and no new range improvements are proposed, thus no conflicts are expected. Oil and gas

potential in the area is considered to be low according to the U.S. Geological Survey and Bureau of Mines report for the area. There are no mining claims and the WSA is not considered prospectively valuable for any mineral resources. The 280 acres of private mineral estate in the recommended area (86 acres) in the Skull Creek WSA are proposed for acquisition.

Table 1 - Land Status and Acreage Summary of the Study Area

<u>Within Wilderness Study Area</u>	<u>Acres</u>
BLM (surface and subsurface)	13,554
Split Estate (BLM surface only)	186
Inholdings (state, private)	<u>0</u>
Total	13,740
<u>Within the Recommended Wilderness Boundary</u>	
BLM (within WSA)	13,554
BLM (outside WSA)	310
Split Estate (within WSA)	<u>186</u>
Total BLM Land Recommended for Wilderness *	14,050
Inholdings (state, private) **	940
<u>Within the Area Not Recommended for Wilderness</u>	
BLM	0
Split Estate	<u>0</u>
Total BLM Land Not Recommended for Wilderness	0
Inholdings (state, private)	0

* Total recommended for wilderness is 27,553 acres when combined with the Willow Creek proposed area

** Table 5 contains a description of inholdings included within the recommended boundary

Criteria Considered in Developing the Wilderness Recommendations

WILDERNESS CHARACTERISTICS

Naturalness

The Skull Creek WSA is predominately natural with negligible human imprints. The area is cut by colorful ridges, hogbacks, deep gullies, and canyons of sandstone eroded by rain and snowmelt water. Numerous drainages running from north to south have eroded through the slick rock forming deep gullies and canyons. Potholes within the slick rock

provide wildlife water sources. Elevations range from 5,800 feet in south to 7,200 feet on the northern boundary. Rugged Box Canyon runs through the entire western portion of the WSA and is especially scenic and interesting with an intermittent creek.

Dense old growth pinyon-juniper woodlands cover a majority of the WSA with openings of sagebrush and native grass plant communities. Saltbush and greasewood communities occupy dry sites in the lower elevations. The entire area is habitat for deer, elk, golden eagles, and numerous other birds, mammals, and reptiles.

Minor imprints of humans in the WSA consist of several ways in the eastern third of the WSA. Natural revegetation is diminishing the impact of these ways.

Solitude

The diverse topography and dense vegetation within the WSA provide outstanding opportunities to experience solitude. The rugged highly dissected terrain and dense woodlands provides excellent screening and allows the visitor to isolate themselves from others in the area. Vistas from several high points along the ridges create a sense of open space and vastness which enhances the feeling of solitude. Combined with the relatively low visitation within the area the opportunities for solitude are truly outstanding.

Primitive and Unconfined Recreation

Skull Creek WSA offers outstanding year-round opportunities for visitors to participate in primitive and unconfined recreational activities including hiking, backpacking, camping, hunting, sightseeing, photography, viewing wildlife and cultural sites, horseback riding, and nature study among others. The outstanding scenery, colorful and unusual geology as well as wildlife values in the WSA contribute to a variety of outstanding primitive types of recreation opportunities. The nearly year-round accessibility of the area contributes to these opportunities. The area is small enough to allow excellent day hikes yet large enough to accommodate multiday trips and allow relatively unconfined movement, especially when combined with the Willow Creek WSA.

Special Features

The Skull Creek WSA is located within the boundary of the 1976 Skull Creek Environmental Study Area, a 58,626 acre area that was first recognized in 1975 as containing an interesting array of natural history resources. Cultural resources identified during the 1976 study include significant archaeological and cultural sites dating back 10,000 years. Sites have been found with sufficient depth and unaltered surface area to

provide scientific data. Some of these sites may be eligible for listing on the National Register of Historic Places. Granaries and one walled rock shelter were located in sandstone faces. A few badly weathered pictographs and a single wickiup cluster were also found. Artifacts found in the WSA include projectile points, knives, drills, scrapers, choppers, grinding stones, pottery, and juniper bark matting. A complete cultural resource inventory has not been conducted.

The University of Arizona conducted a dendrochronological analysis of wood samples from relic pinyon pine in the Skull Creek Basin. Their analysis showed the trees to be at or near the maximum age attainable by the species. The research provides a data base for dendrochronological reconstruction of local climate extending back 600 years. Continued research in the Skull Creek WSA is anticipated.

Significant paleontological resources have been found in the vicinity of the WSA and are likely to occur within the WSA.

DIVERSITY IN THE NATIONAL WILDERNESS PRESERVATION SYSTEM

Assessing the diversity of natural systems and features as represented by ecosystems

Wilderness designation of this WSA would add landforms and ecosystems which currently have little representation in the National Wilderness Preservation System (NWPS). The Skull Creek WSA is in the central part of the Rocky Mountain Forest Province with juniper-pinyon woodland (8,000 acres) and sagebrush steppe (5,740 acres) ecosystems. The sagebrush steppe ecosystem is not represented in Colorado. The juniper-pinyon ecosystem is represented by only one small designated area in Colorado and only 2 small areas nationwide. Dinosaur National Monument to the north is representative of these ecosystems and, although portions are administratively endorsed for wilderness designation, they are not part of the NWPS. (See Table 2)

Table 2 - Ecosystem Representation

<u>Bailey-Kuchler Classification</u>	NWPS Areas		Other BLM Studies	
Province/Potential Natural Vegetation	<u>areas</u> <u>acres</u>		<u>areas</u> <u>acres</u>	
<i>Nationwide</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	2	41,451	22	167,864
Sagebrush Steppe	4	76,129	22	241,520
<i>Colorado</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	1	11,181	16	119,424
Sagebrush Steppe	0	0	9	31,960

Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers

The Skull Creek WSA is within a day's drive of 2 major population centers in Utah and within 6

hours drive of Denver, Colorado. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a 5-hour drive of the population centers.

Table 3 - Wilderness Opportunities for Residents of Major Population Centers

<u>Population Center</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
	<u>areas</u> <u>acres</u>		<u>areas</u> <u>acres</u>	
Salt Lake City/ Ogden	11	685,088	42	1,826,904
Provo /Orem	12	730,088	52	2,307,031

Balancing the geographic distribution of wilderness areas

The Skull Creek WSA would contribute to balancing the geographic distribution of areas within the National Wilderness Preservation System. The nearest designated wilderness is the High Uintas (460,000 acres) some 80 miles to the northwest in Utah. However, the landforms and ecosystems of this wilderness area are entirely different than those found in the Skull Creek WSA. Part of Dinosaur National Monument to the north of the WSA has been administratively endorsed for wilderness, however, much of the area is inaccessible in winter.

The Skull Creek WSA is adjacent to Willow Creek WSA on the west and is recommended for wilderness designation combined with Skull Creek to form one wilderness area. Bull Canyon WSA is 10 miles to the west and is recommended for wilderness designation. These 3 areas complement

each other. The Daniels Canyon WSA (2,496 acres) is located some 30 miles to the northwest in Utah but is not recommended for wilderness designation. An additional 10 study areas are within 2 to 3 hours of the Skull Creek WSA and only 2 of these areas are recommended for wilderness designation. The WSA is generally accessible year-round from a county road, thus expanding opportunities to attain diverse wilderness experiences.

MANAGEABILITY

The recommended area can be effectively managed to preserve its wilderness character. Management is enhanced when combined with the Willow Creek WSA to the west and by proposed state land acquisition and public land additions.

Exchange or acquisition of private lands along the southern boundary is suggested to insure compatible uses. Casual off-highway vehicle (OHV) use has historically occurred in several locations on the



Photo 3. Skull Creek WSA. Granary in Skull Creek WSA.



Photo 4. Skull Creek WSA. Aerial view north into the steep and rugged Box Canyon.

northeastern and eastern boundary but can be effectively closed and managed with an increased BLM presence on the ground.

There are no other major manageability problems or resource conflicts which would result from wilderness designation. There are no mining claims within the WSA and while there are post-FLPMA oil and gas leases, these would not be developed or encumber management of the proposed area as wilderness because stipulations protect wilderness values.

The 186 acres of split estate (private minerals) is proposed for acquisition, although no foreseeable future development is anticipated. The remainder of the subsurface minerals in the WSA are under federal ownership.

There are no existing range improvements within the area and only one developed spring. No new range improvements are proposed.

ENERGY AND MINERAL RESOURCE VALUES

The Skull Creek WSA energy and mineral values were evaluated in *Mineral Resources of the Skull Creek and Willow Creek Wilderness Study Areas, Moffat County, Colorado, U.S. Geological Survey Bulletin 1717-D* (1990).

The WSA has a low resource potential for all metals, including uranium, vanadium, and oil and gas. No mineral resources were identified in the study area. Sand and gravel in the study area have no unique or special properties and no local market. Sand and gravel at other locations nearer to market is better suited for local use.

As of November 1989, no mining activity was known to be taking place within the study area. The study area is not adjacent to any established mining districts, but the area has been prospected for uranium and base metals since the 1870's. In the early 1900's, uranium ore was recovered about 1 mile south of the study area. From 1917 to

1920, the deposit was mined for vanadium and in the 1950's for uranium.

Information collected by BLM reveals that the density and distribution of the 60 plus shallow drill holes in the vicinity of the WSA, lack of production, negative test results, published analysis of the subthrust play and petroleum potential, and paucity of recent drilling activity suggest that the

likelihood of the WSA to contain economic oil and gas deposits is minimal. The area is not prospectively valuable for any other mineral resource.

IMPACTS ON RESOURCES

The following comparative impact table (Table 4) summarizes the effects on pertinent resources for the 4 alternatives for this WSA.

Table 4 - Comparative Summary of the Impacts by Alternative

Impact Topics	Recommendation: Combined All Wilderness Alternative	Conflict Resolution Alternative	All Wilderness Alternative	No Wilderness Alternative
<i>Impacts on Wilderness Characteristics</i>	<i>Opportunities for solitude, primitive and unconfined recreation, high scenic quality, and the naturalness of the area would be protected and increase on 27,553 acres.</i>	<i>Opportunities for solitude, primitive and unconfined recreation and the naturalness of the area would be protected on 19,698 acres and lost on 7,410 acres.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, high scenic quality and the naturalness of the area would be protected on 13,740 acres.</i>	<i>The wilderness values of naturalness and solitude would be lost on the eastern half of the WSA (approximately 6,800 acres) due to increased off-road vehicle use and range improvement projects. Oil and gas exploration would diminish naturalness and solitude in the center of the WSA.</i>
<i>Impacts on Ranching Operations</i>	<i>Livestock forage production within the combined Willow Creek/Skull Creek wilderness would remain at current levels of 1,354 AUMs per year within the proposed area (1,339 AUMs within the WSA.) Due to restrictions on vehicle use, operating costs would be slightly higher.</i>	<i>Livestock forage production within the designated wilderness would remain at current levels of 973 AUMs per year. Operating costs on grazing allotments within the wilderness area would be slightly higher due to restrictions on vehicle use. Available AUMs within the areas not designated as wilderness (1,339 AUMs currently within the WSAs) could increase by 124 due to proposed range improvement projects. There would be a net increase of 124 AUMs (from 1,339 to 1,463 AUMs).</i>	<i>Livestock forage production within the Skull Creek WSA would remain at the current level of 527 AUMs.</i>	<i>Livestock forage production would increase from 527 to 651 AUMs.</i>

Table 4 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: Combined All Wilderness Alternative	Conflict Resolution Alternative	All Wilderness Alternative	No Wilderness Alternative
<i>Impacts on Recreation Use and Quality</i>	<i>Recreation use levels are expected to increase from 600 to 900 visitor days per year for nonhunting and nonmotorized forms of recreation. Hunting use levels would remain at 800 visitor days per year. Recreation use would total 1,700 visitor days per year. Opportunities for primitive recreation would be protected on 27,553 acres.</i>	<i>Recreation use levels within the designated area are expected to increase from 600 to 900 visitor days per year for nonhunting and nonmotorized forms of recreation. Hunting use levels are expected to remain at 800 visitor days per year. Opportunities for primitive and unconfined recreation would be lost on 7,410 acres. Development in the 2,430 acres not recommended as wilderness in Willow Creek WSA would contribute to a loss of scenic quality.</i>	<i>Nonmotorized forms of recreation in the proposed wilderness would increase from 700 to 850 visitor days per year. Off-road vehicle use would be prohibited. Opportunities for primitive and unconfined recreation would remain unchanged in a natural setting.</i>	<i>Recreation use levels would increase from 700 to 850 visitor days per year. Off-road vehicle use associated with hunting is expected to increase to about 75 visitor days per year. Opportunities for primitive forms of recreation would be lost on approximately half of the WSA (approximately 6,800 acres) due to projected development.</i>
<i>Impacts on Water Quality</i>	<i>Since no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>	<i>There would be a short-term (about 3 years) increase in sediment yield and contribution of salts of up to 15 percent from the combined WSAs, although there would probably be a long-term decrease of about 1.5 percent.</i> <i>This would be an immeasurably small short-term contribution to, or long-term decrease in sediment and salts in the White River. These changes are well within the natural variation of up to 25 percent.</i>	<i>Since no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>	<i>There would be an increase in sediment yield and contribution of salts of up to 28 percent from the WSA in the short term (about 3 years), although there would probably be a long-term decrease of about 4 percent. This would be an immeasurably small short-term contribution to, or long-term decrease in, sediment and salts in the White River. The long-term changes are well within the natural variation of up to 25 percent.</i>

Table 4 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: Combined All Wilderness Alternative	Conflict Resolution Alternative	All Wilderness Alternative	No Wilderness Alternative
<i>Impacts on Big Game Species (Populations and Habitat) and Eagles</i>	<i>Habitat would remain in present conditions. Animal numbers of approximately 380 deer, 60 elk, and 5 pair of golden eagles would remain unchanged.</i>	<i>For both WSAs as a whole, there would be an overall increase in use of about 7 deer and 2 elk from present levels of approximately 380 and 60 respectively. No impacts to golden eagles or other raptors would occur.</i>	<i>Habitat would be maintained in its present condition. Animal numbers of approximately 190 deer, 10 elk, and 3 pair of golden eagles would remain unchanged.</i>	<i>There would be an increase in use of about 7 deer and 2 elk from present levels of approximately 190 and 10 respectively. No impacts to golden eagles or other raptors would occur.</i>
<i>Impacts on Mineral Exploration and Production</i>	<i>The area (27,553 acres) would be closed to mineral entry and the low potential for oil and gas exploration and development would be precluded. No subsurface geologic data would be gathered within the WSA.</i>	<i>The areas recommended for wilderness (19,698 acres) would be closed to mining claims and leasing and low potential oil and gas development would be precluded. No subsurface geologic data would be gathered within these areas. The low potential for oil and gas exploration and development could be realized in those portions not recommended for wilderness (7,410 acres). However, no production or development is projected.</i>	<i>The WSA (13,740 acres) would be closed to mineral entry and the low potential for oil and gas exploration and development would be precluded. No subsurface geologic data would be gathered within the WSA.</i>	<i>The area (13,740 acres) would be open to leasing, exploration and development; the low potential for oil and gas development could be realized, although no production is anticipated.</i>
<i>Impacts on Private Lands</i>	<i>Acquisition of portions of adjoining state lands and 280 acres of private mineral estate would be pursued, but current uses of land would continue.</i>	<i>Acquisition of portions of adjoining state lands and 280 acres of private mineral estate would be pursued, but current uses of the land could continue.</i>	<i>Acquisition of a portion of adjoining state land and 186 acres of private mineral estate would be pursued. Current uses of the land could continue.</i>	<i>No impact or change in ownership is anticipated for state or private lands in the area. Current use of the land would continue.</i>

LOCAL SOCIAL AND ECONOMIC CONSIDERATIONS

Designation of the Skull Creek WSA as wilderness would incrementally help to increase long-term recreation use in the Dinosaur area. Greater public awareness and publicity of the area would also draw wilderness users from outside northwest Colorado. Recreation use of the area is projected to increase from 700 to 850 visitor days or more. This increase in recreation use would generate some long-term increase in local income and, although not large, could be noticed in smaller communities in the area such as Dinosaur. These economic benefits to smaller communities could be even more noticeable if all the areas proposed for wilderness in the northwest part of Colorado became wilderness. Social factors were not considered a significant issue in the study.

SUMMARY OF WSA SPECIFIC PUBLIC COMMENTS

Public involvement has occurred throughout the wilderness review process. Certain comments reviewed during the inventory process and early stages of the Draft EIS were used to develop significant study issues and various alternatives for the ultimate management of those lands with wilderness values.

During formal public review of the Draft EIS, a total of 169 comments (53 oral and 116 written) were received which specifically addressed this WSA. In general, 148 comments (88 percent) supported

wilderness designation and 16 (9 percent) favored releasing the area for other uses (no wilderness). Seven comments (3 percent) gave no recommendation.

Specific comments by those favoring wilderness designation generally focused on the outstanding wilderness values, protection of wildlife habitat and biological diversity. A large number of comments supported combining the Willow Creek and Skull Creek WSAs into one designated wilderness area. Several commented on a need for increased access to the area while others said access was adequate. Several comments stated that the area should be expanded to include BLM lands outside the WSA and support the acquisition of adjacent state lands and private mineral estate. Some comments noted a lack of good range management was causing some deterioration of natural qualities as seen through erosion in stream channels and degradation of riparian areas.

Those opposing wilderness designation generally feel that there is enough or too much designated wilderness now and favor other uses for the WSA. Some oppose the restrictions on other uses imposed by wilderness designation.

The National Park Service supports wilderness designation of the Skull Creek WSA. The Colorado Oil and Gas Conservation Commission favors nonwilderness for Skull Creek in order to keep the area open to potential oil and gas exploration. No other federal, state, or local agencies gave WSA specific comments.

Table 5
Estimated Cost of Acquisition of Non Federal Holdings
Within Areas Recommended for Designation^{1/}

<u>Legal Description</u>	<u>Total Acreage</u>	<u>Number of Owners ^{2/}</u>	<u>Type of Ownership By Estate</u>		<u>Presently Proposed for Acquisition</u>	<u>Preferred Method of Acquisition</u>	<u>Estimated Cost of Acquisition ^{3/}</u>	
			<u>Surface Estate</u>	<u>Subsurface Estate</u>			<u>Land Costs</u>	<u>Processing Costs</u>
T.4N.,R.102W.Sec 36	640	1	State	State	Yes	Exchange	NA	\$ 8,000
T.4N.,R.101W.Sec 16, S1/2	300	1	State	State	Yes	Exchange	NA	\$ 8,000
T.4N.,R.102W.Sec 13, NE1/4SE1/4,SE1/4NE1/4, SE1/3SW1/4,SW1/4SE1/4, Sec 24, NW1/4SE1/4 T.4N.,R.101W.Sec 8, SW1/4NW1/4	280	4	Federal	Private	Yes	Purchase	Unknown	\$ 8,000

1/Standard Disclaimer: the estimated costs listed in this appendix in no way represents a formal appraisal value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estate with similar characteristics to those within the WSA. The estimates are for the purpose of establishing a range of potential costs to the government of acquiring non-federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in the appendix.

Processing costs are all miscellaneous expenses other than land costs including work month costs, appraisals, title work, escrow tests, etc.

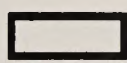
2/If a larger parcel as shown in the first column has been recently subdivided or is jointly owned, this column represents the number of owners that could be involved in any acquisition negotiation.

3/Where exchange is the proposed acquisition method, only administrative costs of processing the exchange are shown. Land costs would not be applicable. Where direct purchase is proposed, an estimate of both the land costs and the processing costs are provided.

T 2 N
T 1 N



R 96 W | R 95 W



RECOMMENDED FOR
WILDERNESS (NONE)



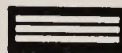
RECOMMENDED FOR
NONWILDERNESS



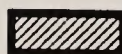
LAND OUTSIDE WSA
RECOMMENDED FOR
WILDERNESS (NONE)



SPLIT ESTATE (NONE)

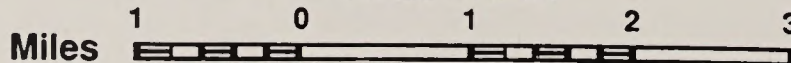


STATE (NONE)



PRIVATE (NONE
WITHIN THE WSA)

SCALE 1:100000



Black Mountain WSA
Proposal
CO-010-007A



January 1991

BLACK MOUNTAIN WILDERNESS STUDY AREA

The Study Area -- 9,932 acres

The Black Mountain WSA (CO-010-007A) is located in Rio Blanco County approximately 11 miles west of Meeker, Colorado. The WSA includes 9,932 acres of BLM lands. The area is bounded on the south by undeveloped private lands and Colorado Highway 64, on the west and north by undeveloped BLM and scattered private lands and on the east by a way and undefined boundaries on undeveloped BLM public lands. A cherrystem was delineated in the southern portion of the WSA in Smith Gulch during the inventory to exclude a portion of a primitive road. The WSA is shown on the map.

Black Mountain is characterized by a series of mesas cut by several deep gulches, small canyons, and side drainages. (See Photo 1) The Smith Gulch drainage runs through the middle of the WSA creating a valley. (See Photo 2) Elevations range from 5,950 feet along the southern boundary to 7,262 feet on a peak on the northeast boundary. The vegetation is predominately dense pinyon-juniper woodlands with sagebrush in the drainages and small areas of saltbush/greasewood communities at lower elevations. There are no other WSAs within the entire Piceance Basin region other than the adjacent Windy Gulch WSA which has different ecosystems.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act

(FLPMA) and was included in the Craig District Wilderness Final Environmental Impact State (EIS) published November 5, 1990. Two alternatives were analyzed in the EIS; all wilderness (9,932 acres) and no wilderness which is the recommendation of this report.

Recommendation and Rationale

0 acres recommended for wilderness

9,932 acres recommended for nonwilderness.

The recommendation is to not designate the Black Mountain WSA as wilderness and to release the area for uses other than wilderness. The all wilderness alternative is the environmentally preferable alternative since its implementation would result in the least change to the natural environment over the long term. There are no conflicts with any other resources or uses within the Black Mountain WSA.

During the study phase of the wilderness review process, BLM decided that the wilderness values contained in this area were not of an overall significance to warrant inclusion in the National Wilderness Preservation System. Once released the area will be managed for multiple uses with no specific or special stipulations to protect any wilderness or other natural values not already protected by regulation or law.

Table 1 - Land Status and Acreage Summary of the Study Area

<u>Within Wilderness Study Area</u>	<u>Acres</u>
BLM (surface and subsurface)	9,932
Split Estate (BLM surface only)	0
Inholdings (state, private)	<u>0</u>
Total	9,932
<u>Within the Recommended Wilderness Boundary</u>	
BLM (within WSA)	0
BLM (outside WSA)	0
Split Estate (within WSA)	<u>0</u>
Total BLM Land Recommended for Wilderness	0
Inholdings (state, private)	0
<u>Within the Area Not Recommended for Wilderness</u>	
BLM	9,932
Split Estate	<u>0</u>
Total BLM Land Not Recommended for Wilderness	9,932
Inholdings (state, private)	0

Criteria Considered in Developing the Wilderness Recommendations

WILDERNESS CHARACTERISTICS

Naturalness

The Black Mountain WSA is predominantly natural in character with negligible human imprints. Minor imprints within the WSA include remnants of 7 stock ponds that have not been maintained and are revegetating naturally and 4.5 miles of scattered drift fence.

The dominant feature in the area is Black Mountain, which is characterized by a series of mesas cut by several gulches and deep side drainages. (See

Photos 1 and 2) Smith Gulch has eroded a valley through the center of the WSA. (See Photo 3) Part of the eastern boundary follows a way on BLM land along a ridgetop to an unnamed peak which is the highest point in the WSA and part of the eastern boundary is undefined on BLM land. Within the upper end of Smith Gulch and side drainages are found highly eroded soils with colorful bands of red, pink, yellow, tan, gray, and green.

The vegetation is predominantly thick stands of pinyon-juniper woodlands with large sagebrush in the lower draws. There is a stand of Douglas fir trees in the east central portion of the WSA and scattered saltbush/greasewood plant communities and associated drought tolerant plant species in the lower elevations.



Photo 1. Black Mountain WSA. View west across Smith Gulch to Black Mountain.

Approximately one-third of the WSA is considered to be severe winter range (critical habitat) for mule deer and approximately one-third of the WSA is elk winter range. Six golden eagle nests are known to occur in the WSA with up to 4 nesting territories for 4 pair of eagles which may simultaneously use the WSA.

Solitude

Due to the topographic and vegetative screening of the area, Black Mountain WSA offers outstanding opportunities for solitude. Black Mountain, Kissinger Gulch, Smith Gulch, and numerous side drainages or canyons provide many opportunities to become truly isolated. The high ridgetops provide vistas which can enhance a feeling of solitude. The numerous steep-sided drainages and dense vegetation enable visitors to isolate themselves from others. The dissected terrain and dense

vegetation give this area ample screening potential and when considered with the low visitor use in the WSA this results in outstanding opportunities for solitude.

Primitive and Unconfined Recreation

Black Mountain WSA provides opportunities for users to participate in a variety of primitive and unconfined recreational activities including hiking, hunting, camping, sightseeing, photography, and horseback riding. However, these opportunities are not considered by BLM to be outstanding or unique within a regional context. A developed campground is proposed in the Beefsteak Gulch area on the White River adjacent to the WSA. This is also an excellent area to establish a trail head and trail system through the Black Mountain WSA and into the Windy Gulch WSA to the north.

Special Features

A portion of the WSA is considered to be severe winter range (critical habitat) for mule deer. No other special features have been identified in this WSA at this time.

DIVERSITY IN THE NATIONAL WILDERNESS PRESERVATION SYSTEM

Assessing the diversity of natural systems and features as represented by ecosystems

Wilderness designation of this WSA would add ecosystems which currently have little representa-

tion in the National Wilderness Preservation System (NWPS). The WSA lies in the Rocky Mountain Forest Province and contains juniper-pinyon woodland (9,932) potential natural vegetation type which dominates most of the area. Small pockets of Douglas fir are found within the area as well as sagebrush steppe, saltbush/greasewood, and native grass communities. The juniper-pinyon woodlands are represented in the NWPS by 1 designated wilderness area in Colorado and 2 areas in the nation. Dinosaur National Monument is representative of this ecosystem but is not designated as wilderness. (See Table 2)

Table 2 - Ecosystem Representation

<u>Bailey-Kuchler Classification</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
Province/Potential Natural Vegetation	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
<i>Nationwide</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	2	41,451	22	167,864
<i>Colorado</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	1	11,181	16	119,424

Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers

The Black Mountain WSA is approximately within a 5-hour drive of Denver. The WSA is approximately 6 hours from the Salt Lake City and Provo, Utah

metropolitan areas. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a 5-hour drive of the population center.

Table 3 - Wilderness Opportunities for Residents of Major Populations Centers

<u>Population Center</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
Denver	20	1,728,410	21	372,010

Balancing the geographic distribution of wilderness areas

The Black Mountain WSA would contribute to balancing the geographic distribution of areas within the National Wilderness Preservation System. The nearest designated wilderness area, Flat Tops Wilderness with 235,035 acres, is approximately 40 miles to the east. However, the high mountain landforms and ecosystems of the Flat Tops are entirely different than those found in the Black Mountain WSA. The Windy Gulch WSA is immediately north of Black Mountain, has different ecosystems, and these 2 WSAs complement each other. There are an additional 5 WSAs within 2 to 3 hours of Black Mountain. The WSA is accessible year-round from Colorado Highway 64 and would expand and balance opportunities to attain diverse wilderness experiences. There are no other WSAs in the Piceance Basin region other than the adjacent Windy Gulch WSA which has different ecosystems.

MANAGEABILITY

The Black Mountain WSA could be effectively managed to preserve its wilderness character. There are no conflicts with any other resources or uses within the area. There are no coal leases, no oil shale leases, and no patented or unpatented mining claims within the WSA. There are post-FLPMA oil and gas leases, however, these would not be developed within the designated area because stipulations protect wilderness values. Portions of 3 grazing allotments lie within the

WSA. Existing range improvements consisting of 7 abandoned stock ponds and 4.5 miles of fence could continue to receive maintenance. The cherry-stemmed primitive road in the southern portion of the WSA could be effectively closed and rehabilitated to become part of the area if the WSA was designated as wilderness.

ENERGY AND MINERAL RESOURCE VALUES

The BLM's energy and mineral resource evaluation of the Black Mountain WSA concludes the area has no to minimal producible mineral resources. Although there are some post-FLPMA oil and gas leases, the structures that trap oil in the fields near the WSA do not appear in the WSA itself. Even though the sediments that produce oil elsewhere are present under Black Mountain, the oil that was probably once in those rocks has migrated upward to the traps which created the neighboring fields.

The WSA is partly within the Naval Oil Shale Reserve, however, no rich oil shale exists within the WSA. The rich oil shale zones found in the Green River Formation to the south in the Piceance Basin have eroded from the WSA.

No other minerals are known to occur within the Black Mountain WSA.

IMPACTS ON RESOURCES

The following comparative impact table (Table 4) summarizes the effects on pertinent resources for the 2 alternatives for this WSA.



Photo 2. Black Mountain WSA. Aerial view looking northwest over the WSA.

Table 4 - Comparative Summary of the Impacts by Alternative

Impact Topics	Recommendation: No Wilderness Alternative	All Wilderness Alternative
<i>Impacts on Wilderness Characteristics</i>	<i>The wilderness values of solitude would be lost in the 9,932-acre WSA as a whole.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, and the naturalness of the area would be protected on 9,932 acres.</i>
<i>Impacts on Ranching Operations</i>	<i>Livestock forage production would increase from 635 to 731 Animal Unit Months (AUMs). Operating costs associated with range improvement projects would remain at current levels because use of motor vehicles for maintenance would be allowed.</i>	<i>Livestock forage production on Black Mountain WSA would remain at the current level of 635 AUMs. Operating costs on grazing allotments within the WSA would be slightly higher due to restrictions on vehicle use.</i>

Table 4 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: No Wilderness Alternative	All Wilderness Alternative
<i>Impacts on Recreation Use and Quality</i>	<i>Nonmotorized visitor use within the WSA would remain at current levels of 400 visitor days per year. Motorized recreation use would increase from less than 50 visitor days per year to 75. Total recreation use would increase from 450 to 475 visitor days per year. Opportunities for primitive recreation would be lost on the majority of the WSA.</i>	<i>Primitive recreation opportunities would remain unchanged. Visitor use levels would increase from the current 450 to 600 visitor days per year. Recreational off-road vehicle use (currently less than 50 visitor days per year) would be prohibited.</i>
<i>Impacts on Water Quality</i>	<i>There would be a short-term increase (about 3 years) in sediment yields and contribution of salts of about 10 percent, and a long-term reduction of about 4.5 percent after that. The impact or change would be an immeasurably small short-term increase, or long-term decrease, in the sediment and salt loads of the White River. These changes are well within the natural variation of about 25 percent.</i>	<i>Since no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>
<i>Impacts on Big Game Species (Populations and Habitat) and Eagles</i>	<i>Deer habitat would be slightly enhanced perhaps increasing the number of deer using the WSA from the present 280 (approximate) to about 300 animals. Habitat for the 20 elk and 4 pair of golden eagles would remain unchanged.</i>	<i>Habitat would be maintained in present condition. Animal numbers of approximately 280 deer, elk, and 4 pair of golden eagles would remain unchanged.</i>
<i>Impacts to Mineral Exploration and Production</i>	<i>There would be no impacts on mineral development. While no development is anticipated to occur, it would not be precluded. Additional subsurface geologic data may be gained.</i>	<i>There would be no impacts on producible mineral resources from wilderness designation, since none are known to exist. No additional subsurface geologic data would be gained.</i>
<i>Impacts on Private Lands</i>	<i>No change in ownership or use of nonfederal land is anticipated.</i>	<i>No change in ownership or use of nonfederal land is anticipated.</i>

LOCAL SOCIAL AND ECONOMIC CONSIDERATIONS

Recreation use of this WSA would show a greater increase with wilderness designation estimated to be up to 600 visitor days per year. An increase with or without wilderness is expected based on the planned development of a campground and trail-head facility at Beefsteak Gulch on the White River adjacent to the WSA. Designation of the WSA as wilderness would incrementally help to increase long-term recreation use even further. Greater public awareness and publicity of the area would also draw wilderness users from outside northwest Colorado. The increase in recreation use would generate some long-term increase in local income and although not large, could be noticed in the Meeker area. These economic benefits to smaller communities could be even more noticeable if all the potential areas in the

northwest part of Colorado became wilderness. Social factors were not considered a significant issue in the study.

SUMMARY OF WSA SPECIFIC PUBLIC COMMENTS

Public involvement has occurred throughout the wilderness review process. Certain comments reviewed during the inventory process and early stages of the Draft Environmental Impact Statement (DEIS) were used to develop significant study issues and various alternatives for the ultimate management of those lands with wilderness values.

During formal public review of the DEIS, a total of 157 comments were received which specifically addressed this WSA (53 oral and 104 written). In general, 134 comments (85 percent) supported wilderness designation and 14 (9 percent) favored



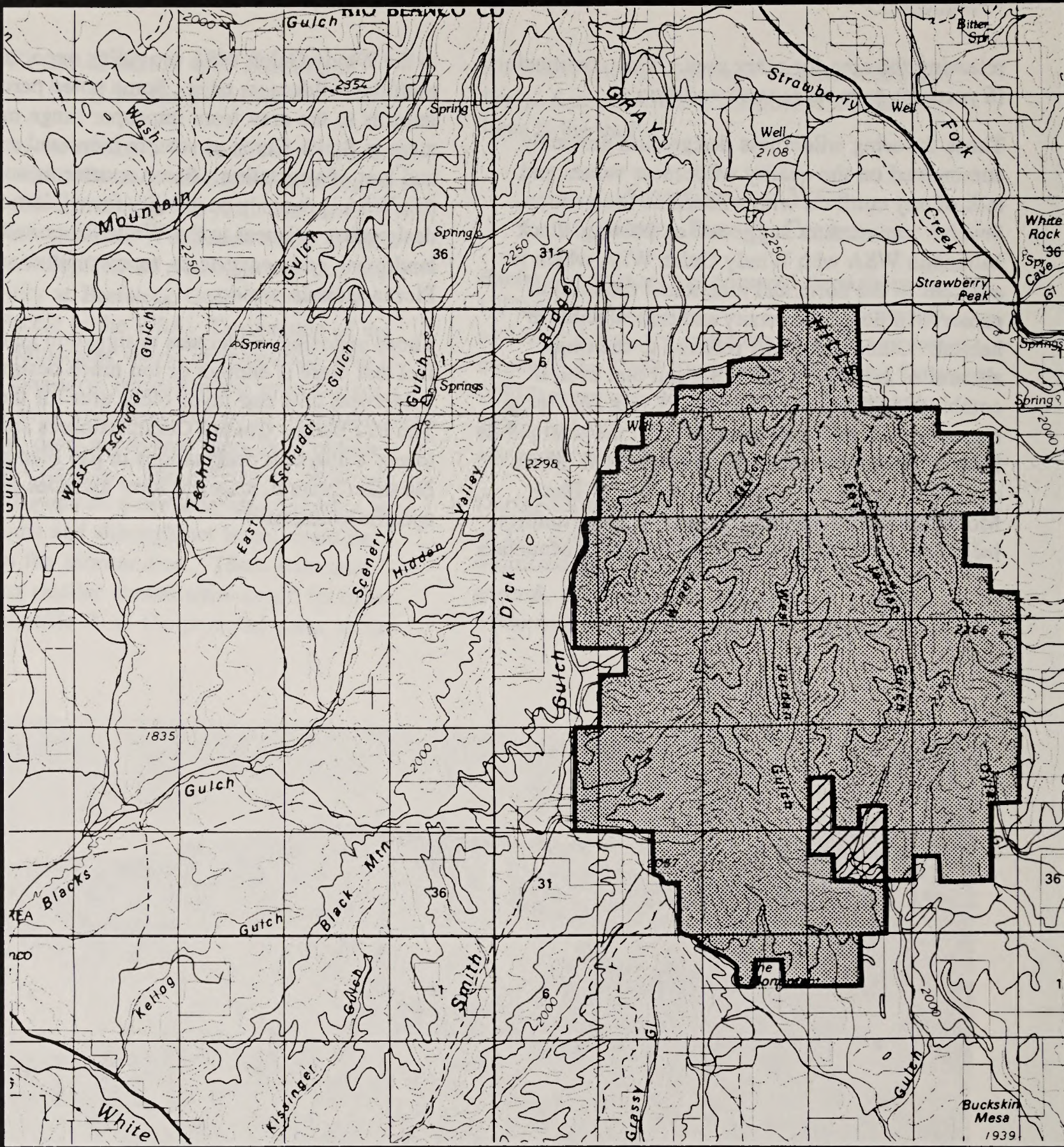
Photo 3. Black Mountain WSA. Smith Gulch.

releasing the area for other uses. Nine commentors (6 percent) gave no recommendation.

Those favoring wilderness designation generally commented on the quality wilderness values and lack of any conflicts with wilderness designation. Several commentors suggested combining Black Mountain WSA with Windy Gulch WSA which is adjacent to the north and mentioned the need to preserve biological diversity and critical wildlife habitat. Other comments referred to the small amount of acreage in the WSA and that even if combined with other WSAs in the Craig District, it represents only a small percentage of the total public lands available for wilderness designation. Some comments noted the easy accessibility of Black Mountain and outstanding recreation opportunities including potential for a trail through Black Mountain

to the Windy Gulch WSA providing opportunities for multiday wilderness trips. Some noted perceived impacts to the area from improper range management in Smith Gulch as seen in increased erosion and loss of vegetation. Some comments noted that this WSA is the only possibility for wilderness designation adjacent to the White River and with landforms and ecosystems representative of the Piceance Basin region.

Those opposing wilderness designation generally feel that there is enough or too much designated wilderness now and favor other uses for the WSA. The Rio Blanco County Commissioners are opposed to any wilderness designations in Rio Blanco County. No other federal, state, or local agencies gave WSA specific comments.






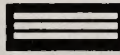


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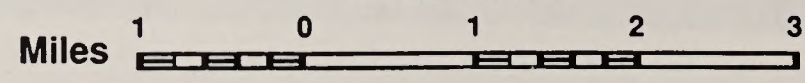
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|---|--|---|---------------------|
|  | RECOMMENDED FOR WILDERNESS (NONE) |  | SPLIT ESTATE (NONE) |
|  | RECOMMENDED FOR NONWILDERNESS |  | STATE (NONE) |
|  | LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS (NONE) |  | PRIVATE |

SCALE 1:100000



Windy Gulch WSA
Proposal
CO-010-007C



January 1991

WINDY GULCH

WILDERNESS STUDY AREA

The Study Area -- 12,274 acres

The Windy Gulch WSA (CO-010-007c) is located in Rio Blanco County approximately 10 miles northwest of Meeker, Colorado. The WSA includes 12,274 acres of BLM lands and a 320-acre private inholding. The area is nearly surrounded by undeveloped private lands, thus inhibiting public access to this WSA. The WSA is shown on the map.

Windy Gulch WSA is characterized by a series of high ridges and deep gulches and side drainages cut by erosion. East and West Jordan Gulches and

Windy Gulch have cut through the Gray Hills, north to south, creating very steep rugged topography. (See Photo 1) Steep rocky cliffs and hillsides support stands of Douglas fir trees and scattered remnants of Ponderosa Pine dot the eastern portion of the area. Wildfires have eliminated the forests at higher elevations which have been replaced with dense stands of oakbrush, serviceberry, mountain mahogany, scattered stands of aspen, and other mountain brush species. (See Photo 2) Lower elevations support tall sagebrush and native grass communities with scattered pinyon-juniper woodlands which adds to the botanic diversity exhibited in the WSA.



Photo 1. Windy Gulch WSA. Aerial view north into East and West Jordan Gulches. Private land inholding in lower center of photo.



Photo 2. Windy Gulch WSA. View of mountain brush ecosystem from the top of Windy Gulch.

The WSA supports habitat for mule deer, elk, and golden eagles as well as an occasional black bear and numerous other birds, mammals, and reptiles. A portion of the WSA is critical habitat (winter concentration area) for mule deer.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Craig District Final Wilderness Environmental Impact Statement published November 5, 1990. Two alternatives were analyzed in the EIS: all wilderness (12,274 acres) and a no wilderness alternative which is the recommendation of this report.

Recommendation and Rationale

0 acres recommended for wilderness

12,274 acres recommended for nonwilderness

The recommendation is to not designate Windy Gulch WSA as wilderness and to release the area for uses other than wilderness. The all Wilderness alternative is the environmentally preferable alternative since its implementation would result in the least change to the natural environment over the long term. There are no conflicts with any other resources or uses within the Windy Gulch WSA.

During the study phase of the wilderness review process, BLM decided that the wilderness values contained in this area were not of an overall significance to warrant inclusion in the National Wilderness Preservation System. Once released from wilderness considerations, the area will be managed for other multiple uses with no specific or special stipulations to protect any wilderness or other natural values not already protected by regulation or law.

Table 1 - Land Status and Acreage Summary of the Study Area

<u>Within Wilderness Study Area</u>	<u>Acres</u>
BLM (surface and subsurface)	12,274
Split Estate (BLM surface only)	0
Inholdings (state, private)	<u>320</u>
Total	12,594
<u>Within the Recommended Wilderness Boundary</u>	
BLM (within WSA)	0
BLM (outside WSA)	0
Split Estate (within WSA)	<u>0</u>
Total BLM Land Recommended for Wilderness	0
Inholdings (state, private)	0
<u>Within the Area Not Recommended for Wilderness</u>	
BLM	12,274
Split Estate	<u>0</u>
Total BLM Land Not Recommended for Wilderness	12,274
Inholdings (state, private)	320

Criteria Considered in Developing the Wilderness Recommendations

WILDERNESS CHARACTERISTICS

Naturalness

The Windy Gulch WSA is predominately natural in character with negligible human imprints. The WSA consists of a series of high ridges dominated by the Gray Hills on the northern and eastern boundary, which have been cut by deep erosion in East and West Jordan Gulches and Windy Gulch as well as numerous side drainages. Elevations range from 6,400 feet in the south to 8,080 feet in the extreme northern part of the WSA.

The rugged, highly dissected topography and elevation range supports diverse vegetative communities. The lower elevations include tall sagebrush, native grasses and forbs, and pinyon-juniper woodlands. Stands of Douglas fir, often dense, are scattered throughout the steep rocky hillsides and cliffs. Dense stands of oakbrush, serviceberry, mountain mahogany, scattered pockets of aspen trees, and other associated mountain shrub species dominate the higher elevations. Remnants of ponderosa pine dot the slopes on the east side of the WSA. Old wildfires have eliminated the scattered forests which dominated the higher elevations to be replaced by mountain shrub species.

Mule deer and elk are the important big game wildlife species that inhabit the WSA. All of the WSA is winter range for deer and the lower elevations are within a winter concentration area (critical habitat) for deer. Much of the area is considered to be elk winter range with resident populations using the northern portion of the WSA.

Five golden eagle nests are known to occur in the WSA and additional cliff nesting raptors and woodland nesting raptors may occupy the WSA. No thorough raptor inventory has been conducted in the WSA. The WSA is habitat for numerous other birds, mammals, and reptiles including an occasional black bear and mountain lion.

Scattered human imprints are substantially unnoticeable and are either screened by vegetation (3 stock ponds) or are being overgrown by natural revegetation (vehicle ways). The Windy Gulch WSA is complemented by the Black Mountain WSA immediately to the south.

Solitude

The rugged dissected topography and dense vegetative screening in the Windy Gulch WSA offer outstanding opportunities for solitude. Public access to this WSA is blocked by surrounding undeveloped private lands, thus low use also contributes to excellent opportunities for solitude. The large, blocked configuration of the area provides ample room for visitors to become isolated and dispersed within the area. The topographic isolation and screening within the deep gulches and drainages creates numerous secluded places. The panoramic views from the high points gives one a sense of vastness and remoteness which contributes to feelings of solitude.

Primitive and Unconfined Recreation

There are many opportunities to engage in primitive outdoor recreation pursuits such as hiking, hunting, backpacking, horseback riding, viewing wildlife, and study of the botanic diversity of the WSA. These opportunities are not considered by BLM to be particularly outstanding or unique in a regional context. Access into the area is currently poor. There is potential to link the Windy Gulch WSA with the Black Mountain WSA to the south with a trail system which would allow multiday horse or backpack trips into these areas.

Special Features

A portion of the WSA is identified as severe winter range and a winter concentration area (critical habitat) for mule deer. No other special features have been identified in this WSA at this time.

DIVERSITY IN THE NATIONAL WILDERNESS PRESERVATION SYSTEM

Assessing the diversity of natural systems and features as represented by ecosystems

Wilderness designation of this WSA would add landforms and ecosystems that currently have little or no representation in the National Wilderness Preservation System in Colorado. Windy Gulch WSA is in the central part of the Rocky Mountain Forest Province with juniper-pinyon woodland (4,274 acres) and mountain mahogany-oak scrub (8,000 acres) ecosystems. The WSA exhibits botanic diversity with large areas of Douglas fir stands, sagebrush steppe, and native grass communities and scattered pockets of ponderosa pine all in a climax stage which adds interest and uniqueness to the WSA. (See Table 2)

Table 2 - Ecosystem Representation

<u>Bailey-Kuchler Classification</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
Province/Potential Natural Vegetation	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
<i>Nationwide</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	2	41,451	21	163,574
Mountain Mahogany-Oak Scrub	7	80,852	7	35,840
<i>Colorado</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	1	11,181	15	115,134
Mountain Mahogany-Oak Scrub	0	0	5	30,495

Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers

The Windy Gulch WSA is within a day's drive of two major population centers in Colorado and

about a 6-1/2 hour drive from other metropolitan areas in Colorado and Utah. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a 5-hour drive of the population centers.

Table 3 -Wilderness Opportunities for Residents of Major Populations Centers

<u>Population Center</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
Denver	20	1,728,410	21	372,010
Boulder	20	1,728,410	21	372,010

Balancing the Geographic Distribution of Wilderness Areas

The Windy Gulch WSA would contribute to balancing the geographic distribution of areas within the National Wilderness Preservation System. The nearest designated wilderness is the Flat Tops (235,035 acres) some 40 miles to the east. However, the high mountain landforms and ecosystems of the Flat Tops are entirely different than those

found in the Windy Gulch WSA. The Black Mountain WSA is immediately south of Windy Gulch and these two WSAs complement each other with different ecosystems. There are an additional 5 WSAs within 2 to 3 hours of Windy Gulch. Access to the WSA is difficult and at present the Black Mountain WSA provides the only physical public land access route. There are no other WSAs in the Piceance Basin region other than the adjacent Black Mountain WSA.

MANAGEABILITY

The Windy Gulch WSA could be effectively managed to preserve its wilderness character. There are no conflicts with any other resources or uses in the WSA. There are no coal leases and no patented or unpatented mining claims that would encumber management as wilderness. There are post-FLPMA oil and gas leases, however, these would not be developed within a designated wilderness area because stipulations protect the wilderness values. A portion of the area lies within the Naval Oil Shale Reserve, however, no rich oil shale exists within the WSA. Portions of 6 livestock grazing allotments lie within the WSA. Existing range improvements consisting of 3 stock ponds and .25 miles of fence would continue to receive maintenance. Even though the WSA contains a 320-acre private inholding in the southeastern corner, no management conflicts would be expected.

ENERGY AND MINERAL RESOURCE VALUES

The BLMs energy and mineral resource evaluation of the Windy Gulch WSA concludes the area has no to minimal producible mineral resources. Although there are some post-FLPMA oil and gas leases, the structures that trap oil in the fields near the WSA do not appear in the WSA itself. Even though the sediments that produce oil elsewhere are present under Windy Gulch, the oil that was probably once in those rocks has migrated upward to the traps which created the neighboring oil fields.

The WSA is partly within the Naval Oil Shale Reserve, however, no rich oil shale exists within the WSA. The rich oil shale zones found in the Green River Formation to the south in the Piceance Basin have eroded from the WSA. No other minerals are known to occur within the Windy Gulch WSA.

IMPACTS ON RESOURCES

The following comparative table (Table 4) summarizes the effects on pertinent resources for the 2 alternatives for this WSA.

Table 4 - Comparative Summary of the Impacts by Alternative

Impact Topics	Recommendation: No Wilderness Alternative	All Wilderness Alternative
<i>Impacts on Wilderness Characteristics</i>	<i>The wilderness values of naturalness and solitude would be lost over most of the 12,274-acre WSA due to the impairing nature of proposed range improvement projects.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, and the naturalness of the area would be protected on 12,274-acre WSA. Naturalness would be enhanced by allowing existing ways and trails to rehabilitate.</i>
<i>Impacts on Ranching Operations</i>	<i>Livestock forage production would increase from current levels of 879 AUMs per year to 1,071 AUMs. Maintenance costs associated with range projects would remain at current levels because motor vehicle use would be allowed.</i>	<i>Livestock forage production would remain at the current level of 879 AUMs. Motor vehicle use restrictions for range project maintenance would increase the cost of keeping cattle on the WSA, although the use of mechanized equipment may be allowed under specific conditions for individual projects.</i>

Table 4 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: No Wilderness Alternative	All Wilderness Alternative
<i>Impacts on Recreation Use and Quality</i>	<i>Recreation use is expected to remain at current levels of about 250 to 300 visitor days per year for hunting and less than 30 visitor days per year for hiking and backpacking. No off-road vehicle use is known or expected to occur. Opportunities for primitive forms of recreation would be lost due to activities associated with range improvement projects.</i>	<i>Hunting use would increase to about 450 to 500 visitor days per year and hiking/backpacking to about 80 visitor days per year due to acquisition of a right-of-way that would allow legal public access. Off-road vehicle use would be prohibited (none is known to occur). Primitive recreation opportunities within the WSA would remain unchanged.</i>
<i>Impacts on Water Quality</i>	<i>There would be a short-term 26 percent increase for (about 3 years) in sediment yield and produced salts from the WSA and a long-term decrease in sediment yield and produced salts of about 4 percent after that. The impact or change would be an immeasurably small short term increase followed by a long term decrease in the sediment and salt loads of the White River. The long-term changes are well within the natural variation of about 25 percent.</i>	<i>Since no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>
<i>Impacts on Big Game Species (Populations and Habitat) and Eagles</i>	<i>Deer and elk habitat would be slightly enhanced, perhaps increasing the number of deer currently using the WSA from 350 to about 375. There could be an increase in the number of elk using the WSA from the current levels of 40 to about 45. Golden eagle nesting and foraging habitat would remain unchanged.</i>	<i>Habitat would be maintained in present condition. Animal numbers of approximately 350 deer, 40 elk, and 4 pair of golden eagles utilizing the area would remain unchanged.</i>
<i>Impacts to Mineral Exploration and Production</i>	<i>The WSA would be open to leasing and mining claims, however, no mineral exploration or development is anticipated. Hence, no impact to mineral resources would occur.</i>	<i>There would be no impacts on producible mineral resources from wilderness designation, since none are known to exist. No additional subsurface geologic data would be gained.</i>
<i>Impacts on Private Lands</i>	<i>No impact or change in ownership of 320 acres of private land within the WSA is anticipated.</i>	<i>No change in use or ownership on private lands would occur. BLM would seek to acquire an easement to provide public access to the area.</i>

LOCAL SOCIAL AND ECONOMIC CONSIDERATIONS

Nondesignation of the Windy Gulch WSA as wilderness would see no change in uses within the area. Wilderness designation would see an increase in long term recreation use from the current estimate of 380 rising to 580 visitor days per year or more. This increase would be due to acquisition of public access into the area as well as greater public awareness and publicity of public lands. This would help draw wilderness users from outside northwest Colorado. This increase in recreation would generate some long term increase in local income and although not large, could be noticed in the Meeker area. These economic benefits to smaller communities could be even more noticeable if all the potential areas in the northwest part of Colorado became wilderness. Social factors were not considered a significant issue in the study.

SUMMARY OF WSA SPECIFIC PUBLIC COMMENTS

Public involvement has occurred throughout the wilderness review process. Certain comments reviewed during the inventory process and early stages of the Draft Environmental Impact Statement (DEIS) were used to develop significant study issues and various alternatives for the ultimate management of those lands with wilderness values.

During formal public review of the DEIS, a total of 156 comments were received which specifically addressed this WSA (53 oral and 103 written). In

general, 131 comments (84 percent) supported wilderness designation and 14 (9 percent) favored releasing the area for other uses. Eleven comments (7 percent) gave no recommendation.

Those favoring wilderness designation generally commented on the outstanding wilderness values in the area and lack of conflicts with wilderness designation. Several commenters suggested combining Windy Gulch with Black Mountain WSA to the south and the potential for a trail system through Black Mountain WSA and into Windy Gulch WSA. Some mentioned the biological diversity and important wildlife habitat the area contains. Others referred to the relatively small amount of acreage in the WSA and even if combined with other WSAs in the Craig District, the acreage represents only a small percentage of the total public lands available for wilderness designation. Some mentioned that access to this WSA needs to be acquired. Some noted that Windy Gulch and Black Mountain WSAs are the only possibility for wilderness designation with landforms and ecosystems representative of the Piceance Basin region.




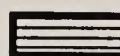
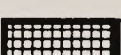

Those opposing wilderness designation generally feel that there is enough or too much designated wilderness now and favor other uses for the WSA. The Rio Blanco County Commissioners are opposed to any wilderness designation in Rio Blanco County. No other federal, state, or local agencies gave WSA specific comments.

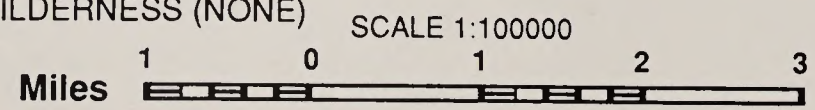
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|  | RECOMMENDED FOR WILDERNESS (NONE) |  | SPLIT ESTATE (NONE) |
|  | RECOMMENDED FOR NONWILDERNESS |  | STATE (NONE) |
|  | LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS (NONE) |  | PRIVATE (NONE) |



Oil Spring Mountain WSA
Proposal
CO-010-046

January 1991

OIL SPRING MOUNTAIN WILDERNESS STUDY AREA

The Study Area -- 17,740 acres

The Oil Spring Mountain WSA (CO-010-046) is located in Rio Blanco County approximately 25 miles southwest of Rangely, Colorado. The WSA includes 17,740 acres of BLM lands. Maintained dirt roads form most of the boundary of the WSA. A "cherrystem" was delineated in the southwest boundary during the inventory process to exclude an old road that leads to a shut-in gas well. BLM public lands surround the entire WSA. The WSA is shown on the map.

The area is dominated by flat-topped Oil Spring Mountain and its associated ridges and numerous side drainages. Elevations span over 2,500 feet and encompass 5 diverse vegetative communities. The lower elevations support saltbush/greasewood, sagebrush, and pinyon-juniper woodland communities. (See Photo 1) Dense mountain shrub plant communities with mountain mahogany, serviceberry, snowberry, oak scrub, pockets of aspen, and associated mountain shrub species dominate the mid to upper slopes. (See Photo 2) A dense stand of Douglas fir and associated understory dominates the top of Oil Spring Mountain.

Oil Spring Mountain is an undeveloped island surrounded by scattered oil and gas wells, roads, and drill pads. There are no other areas remaining in a natural state with similar landforms and ecosystems within the oil and gas development belt in this region of western Colorado.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Craig District Wilderness Final Environmental Impact Statement (EIS) published on November 5, 1990. Three alternatives were analyzed in the EIS; boundary adjustment (18,510 acres designated as wilderness; the result of adding 770 acres of adjacent land already acquired from the State of Colorado), all wilderness (17,740 acres designated as wilderness) and no wilderness (which is the recommendation of this report).

Recommendations and Rationale

0 acres recommended for wilderness

17,740 acres recommended for nonwilderness

The recommendation is to not designate Oil Spring Mountain WSA as wilderness and to release the area for uses other than wilderness. The Boundary Adjustment Alternative (18,510 acres designated as wilderness) is the environmentally preferable alternative since its implementation would result in the least change to the natural environment over the long term.

The reason for the no wilderness recommendation is the existence of 15 oil and gas leases within the WSA dating from before the Federal Land Policy and Management Act of 1976 (pre-FLPMA oil and gas leases). Pre-FLPMA leases are not subject to the regulations that FLPMA created and, therefore, lease holders could develop these leases by building roads to, drilling from, and occupying drill pads all on the ground surface of the lease. The 15 leases are spread throughout the WSA.

The pre-FLPMA oil and gas leases are currently in 2 basic conditions: 1) leases with operating oil and gas wells (4 leases); and 2) leases held by producible shut-in oil and gas wells (11 leases). These pre-FLPMA leases carry a valid existing right for development. There are an additional 2 post-FLPMA leases nearing their expiration date and 3 leases pending issuance.

In addition to the leases that have producible wells, the WSA is partly covered by leases that are held valid under a unit agreement. Currently, the Missouri Creek Unit consists of 2 separate parts, an area of about 600 acres (the Morrison Formation participating area), and an area of about 900 acres (the Mancos "A" participating area). The Morrison part of the unit is held exclusively by the producibility of one shut-in well on one lease and only a portion of the Morrison area is within the Oil Spring Mountain WSA. Five leases are physically a part of the Morrison participating area and are in the WSA. No



Photo 1. Oil Spring Mountain WSA. View toward Oil Spring Mountain from low elevations.

part of the actively producing Mancos "A" area is within the WSA.

Thus, 4 leases in the WSA are held by production of gas and/or oil. An additional 11 leases are held by producibility of a shut-in well. In addition to the leases held by production, the unit agreement involving the 2 separate portions of the Missouri Creek Unit holds an additional 6 leases.

The Oil Spring Mountain WSA lies on the west side of the Douglas Creek Arch near the crest of the anticline. The Douglas Creek Arch constitutes the largest federal gas field in Colorado. Total production to date and estimated reserves for the Douglas Creek Arch is approximately 500 billion cubic feet of natural gas and 250,000 barrels of oil. Oil Spring Mountain WSA is estimated to contain 2.5 percent of that amount.

Development of the Mancos Formation gas sands and some oil from the Frontier/Dakota sands has been accomplished to its present level through intensive drilling in the late 1970s and 1980s. Some

drilling activity occurred in the WSA in the first phase of exploration on the arch in the 1950s and 1960s. Oil companies were looking for fields that were much larger than is currently feasible and profitable by today's standards. With the rapid rise in oil and gas prices in the 1970s, the gas sands and the small Frontier/Dakota oil plays became profitable. There are 2 reasons drilling in the WSA has not kept up with the surrounding area. First, Wilderness Study Area designation and the stipulations to prevent impairment of the WSA's wilderness characteristics have discouraged holders of post-FLPMA leases from developing them within the WSA. Second, by the time the height of drilling activity occurred along the Douglas Creek Arch, WSA status concerned the pre-FLPMA lease holders. The concerns revolved around long-term costs and other potential problems associated with development inside a WSA or possible wilderness area.

Table 1 - Land Status and Acreage Summary of the Study Area

<u>Within Wilderness Study Area</u>	<u>Acres</u>
BLM (surface and subsurface)	17,740
Split Estate (BLM surface only)	0
Inholdings (state, private)	<u>0</u>
Total	17,740
<u>Within the Recommended Wilderness Boundary</u>	
BLM (within WSA)	0
BLM (outside WSA)	0
Split Estate (within WSA)	<u>0</u>
Total BLM Land Recommended for Wilderness	0
Inholdings (State, Private)	0
<u>Within the Area Not Recommended for Wilderness</u>	
BLM	17,740
Split Estate	<u>0</u>
Total BLM Land Not Recommended for Wilderness	17,740
Inholdings (State, Private)	0

Criteria Considered in Developing the Wilderness Recommendations

WILDERNESS CHARACTERISTICS

Naturalness

The Oil Spring Mountain WSA is predominantly natural in character with negligible human imprints. The flat-topped Oil Spring Mountain dominates the southeastern half of the WSA with associated ridges and numerous side drainages radiating out in all directions. The WSA trends to the northwest from Oil Spring Mountain as elevations drop and land-forms change from a mountain to arid slickrock type/landscapes with numerous sandstone draws, a cave and natural arch. Natural earth flows have occurred in several locations on the highly erosive soils on Oil Spring Mountain. Elevations range from

6,000 feet in the northwest to 8,550 feet on Oil Spring Mountain to the southeast.

At least 5 separate and diverse botanic communities are found in the WSA. The lower elevations support saltbush/greasewood, sagebrush steppe, and pinyon-juniper woodland plant communities. Dense mountain shrub communities with mountain mahogany, serviceberry, snowberry, oakscrub, pockets of aspen trees, and associated mountain shrub species dominate the mid to upper slopes. A dense stand of Douglas fir, and associated understory, dominates the top of Oil Spring Mountain.

Oil Spring Mountain WSA is an undeveloped island surrounded by scattered oil and gas wells, roads, and drill pads. As more development occurs in surrounding lands, the WSA serves as a refuge for native flora and fauna that have been displaced by

human activities. The WSA provides valuable and diverse habitat which supports mule deer, elk, black bear, raptors, and other species of wildlife indigenous to western Colorado. There are no other remaining undeveloped areas of similar landform and ecosystems in the oil and gas development belt in this region of western Colorado.

Only minor imprints of humans are scattered around the periphery of the WSA. Existing range improvements within the WSA include 5 improved springs and 7 stock ponds which are screened by vegetation and topography. Eleven abandoned or plugged drillholes occur within the WSA and 2 shut-in gas wells are in the western portion of the WSA, all of which are well screened by vegetation or topography and remain substantially unnoticeable within the area.

Solitude

Topographic and vegetative screening within the WSA provides outstanding opportunities for visitors to experience solitude. The large blocked configuration of the WSA provides ample room for visitors to disperse and become isolated or segregated from others using the area. The relatively low use within the WSA also contributes to outstanding opportunities for solitude.

The panoramic and expansive views from the top of Oil Spring Mountain gives one the sense of remoteness and vastness which contributes to the feelings of isolation and solitude. (See Photo 2) Opportunities for solitude are somewhat lessened by oil and gas activity and traffic at the immediate periphery of the WSA although topographic and vegetative screening diminishes the effect of these outside sights and sounds. However, if development were to occur on all pre-FLPMA oil and gas leases within the WSA, opportunities for solitude would be degraded to a less than outstanding condition.

Primitive and Unconfined Recreation

The WSA contains outstanding opportunities for primitive and unconfined recreation. Big game hunting is the major activity while others include hiking, backpacking, horseback riding, and viewing wildlife. The rugged dissected topography and varying landforms are appealing for photography. The very diverse botanic communities within the

WSA provide exceptional opportunities for nature study activities.

The area is accessible via dirt roads which nearly surround the WSA. The large blocked configuration allows for unconfined movement within the WSA. Low use of this WSA contributes to excellent primitive recreation experiences.

Special Features

A portion of the WSA is identified as critical habitat (summer range) for mule deer. The diverse vegetation types also provides a variety of wildlife habitat and biological diversity. The WSA is an undeveloped island surrounded by oil and gas development. The area provides undisturbed habitat for flora and a refuge for fauna displaced by human activities outside the WSA. A small natural arch and small cave in the southwest portion of the WSA adds interest. Archaeological sites also occur in the WSA but there have been no formal cultural resource inventories to determine their significance. No other special features are known to occur in the WSA.

DIVERSITY IN THE NATIONAL WILDERNESS PRESERVATION SYSTEM

Assessing the diversity of natural systems and features as represented by ecosystems

Wilderness designation of this WSA would add ecosystems which currently have little representation in the National Wilderness Preservation System (NWPS) and are absent in Colorado. The WSA lies in the central part of the Rocky Mountain Forest Province. This diverse WSA can be separated into 4 potential natural vegetation ecosystems: juniper-pinyon woodland (10,000 acres), sagebrush steppe (1,000 acres), mountain mahogany/oak-scrub (6,000 acres), and pine-douglas fir forest (740 acres). An additional vegetation type (saltbush/greasewood) occurs at lower elevations in the WSA but occurs in small areas. The sagebrush steppe and mountain mahogany-oakbrush ecosystems are not represented in any Colorado wilderness. The juniper-pinyon woodland ecosystem is represented in only 1 designated wilderness in Colorado and only 2 areas nationwide. The pine-douglas fir forest ecosystem is represented in 4 wilderness areas in Colorado. Table 2 summarizes ecosystem representation in the NWPS and in other BLM study areas.

Table 2 - Ecosystem Representation

<u>Bailey-Kuchler Classification</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
Province/Potential Natural Vegetation	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
<i>Nationwide</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	2	41,451	22	167,864
Sagebrush Steppe	4	76,129	22	241,526
Mountain Mahogany/Oak-Scrub	7	80,852	7	35,840
Pine-Douglas Fir Forest	10	210,751	13	93,601
<i>Colorado</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	1	11,181	16	119,424
Sagebrush Steppe	0	0	9	31,960
Mountain Mahogany-Oak Scrub	0	0	5	30,495
Pine-Douglas Fir Forest	4	98,531	12	92,316

Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers

summarizes the number and acreage of designated areas and other BLM study areas within a 5-hour drive of the population centers.

The Oil Spring Mountain WSA is within a day's drive of 2 major population centers in Utah. Table 3

Table 3 - Wilderness Opportunities for Residents of Major Population Centers

<u>Population Center</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
Salt Lake City	11	685,088	42	1,826,904
Provo - Orem	12	730,088	52	2,307,031

Balancing the geographic distribution of wilderness areas

The Oil Spring Mountain WSA would contribute to balancing the geographic distribution of areas within the National Wilderness Preservation System. The nearest designated wilderness is the High Uintas (460,000 acres) some 90 miles to the northwest in Utah and the Flat Tops (235,035 acres) some 75 miles to the east. These high mountain wilderness areas contain entirely different landforms and ecosystems than the Oil Spring Mountain WSA. Oil Spring Mountain is set apart from 5 other WSAs within a 1 to 2 hour drive and contains different ecosystems and landforms than any of these WSAs. The WSA is accessible earlier and later in the year than the high mountain wilderness areas. Oil Spring Mountain WSA would contribute to expanding and balancing opportunities to attain diverse wilderness experiences.

MANAGEABILITY

The Oil Spring Mountain WSA could not be effectively managed for wilderness because of pre-FLPMA oil and gas leases which cover up to one-third of the WSA. The 15 leases which are scattered through much of the WSA could be developed because of prior and existing rights and BLM policy. Refer to the *recommendations and rationale* section of this report for a complete discussion. These pre-FLPMA lease areas cannot be eliminated from the WSA by adjusting the boundary. The result would be an area without high quality wilderness characteristics.

There are no other major manageability problems or resource conflicts. The entire WSA is BLM land with no inholdings. There are no mining claims within the area and potential for other minerals is low. The WSA contains portions of 2 grazing

allotments totaling an estimated 780 animal unit months (AUMs). Existing range improvements, including 7 stock ponds and 5 improved springs, would continue to receive maintenance. There are no new range improvements planned in the WSA.

ENERGY AND MINERAL RESOURCE VALUES

Oil Spring Mountain WSA is considered to have very high potential for producible oil and gas based on discoveries in and around the WSA. There are 2 wells that are currently capable of production (shut-in gas wells) within the WSA boundary. Wells in the vicinity of the WSA produce from the Mancos "B" and/or Dakota formations. The Mancos "B" sand is found at a depth of 1,500 to 5,000 feet and the Dakota Sands at about 5,000 to 7,500 feet below land surface. Most of the WSA is not yet drilled even though most of the oil and gas leases are pre-FLPMA. The remainder of the WSA is under post-FLPMA leases or expired leases.

The WSA lies on the west side of the Douglas Creek Arch near the crest of the anticline. The Douglas Creek Arch constitutes the largest federal gas field in Colorado. Total production to date and estimated reserves for the Douglas Creek Arch is approximately 500 billion cubic feet of natural gas and 250,000 barrels of oil. The Oil Spring Mountain WSA is estimated to contain 12.5 billion cubic feet of producible gas, which is 2.5 percent of the amount within the Douglas Creek arch. No other mineral resources other than oil and gas have been identified in the WSA. There are no mining claims.

IMPACTS ON RESOURCES

The following comparative impact table (Table 4) summarizes the effects on pertinent resources for the 3 alternatives for this WSA.

Table 4 - Comparative Summary of the Impacts by Alternative

Impact Topics	Recommendation: No Wilderness Alternative	Boundary Adjustment Alternative	All Wilderness Alternative
<i>Impacts on Wilderness Characteristics</i>	<i>The wilderness values of naturalness, solitude, and opportunities for primitive and unconfined recreation would be lost over the entire 17,740 acre WSA due to oil and gas development, range improvement projects, and increased off-road vehicle use.</i>	<i>Wilderness values of naturalness, outstanding opportunities for solitude, and primitive and unconfined recreation would be lost on approximately 12,000 acres of the 18,510-acre area due to mineral exploration and development. The remainder of the area would be managed to protect these wilderness values.</i>	<i>Wilderness values of naturalness, outstanding opportunities for solitude, and primitive and unconfined recreation would be lost on approximately 12,000 acres of the 17,740 acre WSA due to natural gas exploration and development. The remainder of the area would be managed to protect these wilderness values.</i>
<i>Impacts on Ranching Operations</i>	<i>No change in use of the current level of 780 AUMs would occur. However, up to 40 AUMs of the available forage potential could be lost due to oil and gas development activities affecting 400 acres of surface.</i>	<i>Mineral (oil and gas) exploration and development would reduce the amount of available forage by about one percent from the current level of 814 AUMs (780 AUMs are found in the original WSA). Motor vehicle use for maintenance of existing range improvements would be restricted to those projects qualifying under BLM's Wilderness Policy.</i>	<i>Mineral (oil and gas) exploration and development would reduce the amount of available forage by about one percent from the current level of 780 AUMs. Motor vehicle use for maintenance of existing range improvements would be restricted to those projects qualifying under BLM's Wilderness Policy.</i>
<i>Impacts on Recreation Use and Quality</i>	<i>Nonmotorized recreation use would remain at 450 visitor days per year. Motorized use associated with hunting would increase to 200 visitor days per year. Use would total about 650 visitor days per year. Opportunities for primitive and unconfined recreation would be lost over the entire WSA as a result of development activities.</i>	<i>Opportunities for primitive recreation would be lost or lessened on approximately 12,000 acres of the WSA. Use levels are expected to remain at about 550 visitor days per year. Recreational ORV use would be prohibited.</i>	<i>Opportunities for primitive recreation would be lost or lessened on approximately 12,000 acres of the area. Use levels are expected to remain at about 550 visitor days per year. Recreational ORV use would be prohibited.</i>

Table 4 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: No Wilderness Alternative	Boundary Adjustment Alternative	All Wilderness Alternative
<i>Impacts on Water Quality</i>	<i>Up to a 4 percent increase in sediment yield and contribution of salts from the WSA could result. This would be an immeasurably small contribution to the White River, and is well within the natural variation of about 25 percent per year.</i>	<i>Up to a 2 percent increase in sediment yield and contribution of salts from the WSA could result. This would be an immeasurably small contribution to the White River, and is well within the natural variation of about 25 percent per year.</i>	<i>Up to a 2 percent increase in sediment yield and contribution of salts from the WSA could result. This would be an immeasurably small contribution to the White River, and is well within the natural variation of about 25 percent per year.</i>
<i>Impacts on Big Game Species (Populations and Habitat) and Eagles</i>	<i>There would be a decline or displacement of up to 75 of the approximately 150 deer and 10 of the approximately 19 elk. No impacts to golden eagles, other raptors, or the estimated 5 bears which inhabit the WSA are anticipated.</i>	<i>There would be a decline or displacement of up to 28 of the approximately 150 deer and 4 of the approximately 19 elk. No impacts to golden eagles, other raptors, or the estimated 5 bears which inhabit the WSA are anticipated.</i>	<i>There would be a decline or displacement of up to 28 of the approximately 150 deer and 4 of the approximately 19 elk. No impacts to golden eagles, other raptors, or the estimated 5 bears which inhabit the WSA are anticipated.</i>
<i>Impacts on Mineral Exploration and Production</i>	<i>The WSA (17,740 acres) would be reopened to leasing, exploration, and development. Oil and gas development would proceed at a rate commensurate with new development along the Douglas Creek Arch, and could produce 12.5 billion cubic feet of natural gas.</i>	<i>The area (18,510 acres) would be closed to further mineral leasing and mining claims. Except for the pre-FLPMA oil and gas leases and the unitized area, no further exploration or development would take place. Development of about 8 billion cubic feet of natural gas would be foregone. About 4.5 billion cubic feet of natural gas would be produced.</i>	<i>The area (17,740 acres) would be closed to further mineral leasing and mining claims. Except for the pre-FLPMA oil and gas leases and the unitized area, no further exploration or development would take place. Development of about 8 billion cubic feet of natural gas would be foregone. About 4.5 billion cubic feet of natural gas could be produced.</i>
<i>Impacts on Private Lands</i>	<i>No impact to or change in ownership or private land is anticipated.</i>	<i>No impact to or change in ownership of private land is anticipated.</i>	<i>No impact to or change in ownership of private land is anticipated.</i>

LOCAL SOCIAL AND ECONOMIC CONSIDERATIONS

Designation or nondesignation of this WSA as wilderness would have negligible impacts on local

economic conditions. Social factors were not considered a significant issue in the study.

SUMMARY OF WSA SPECIFIC PUBLIC COMMENTS

Public involvement has occurred throughout the wilderness review process. Certain comments reviewed during the inventory process and early stages of the Draft Environmental Impact Statement (DEIS) were used to develop significant study issues and various alternatives for the ultimate management of those lands with wilderness values.

During formal public review of the DEIS, a total of 163 comments (52 oral and 111 written) were received which specifically addressed this WSA. In general, 139 comments (85 percent) supported wilderness designation and 14 comments (9 percent) favored releasing the area for other uses (No wilderness). Ten comments (6 percent) gave no recommendation.

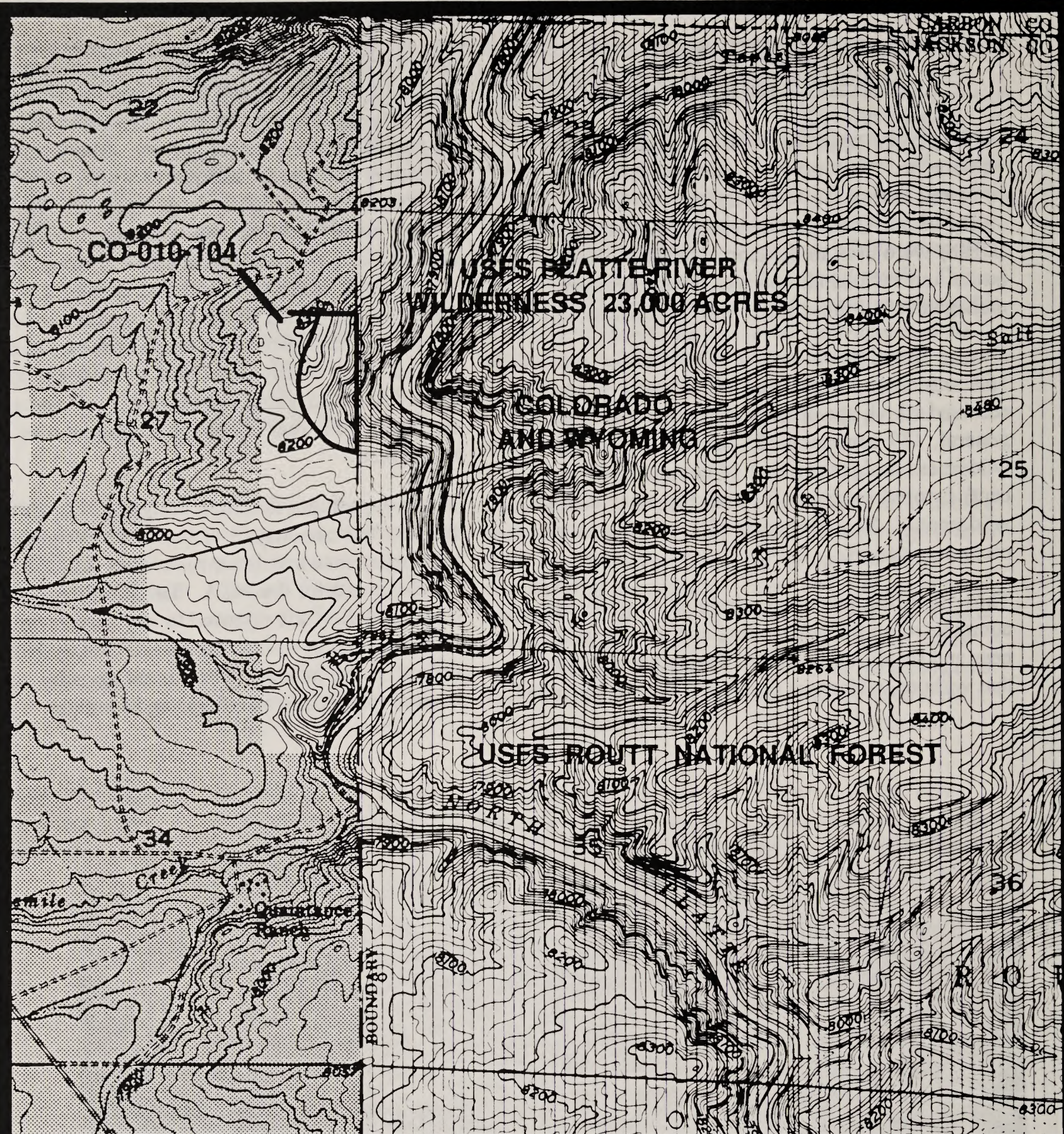
Those favoring wilderness designation generally commented on the outstanding and unique wilderness and scenic values of Oil Spring Mountain and that without wilderness protection this undeveloped

island will be irretrievably lost. Many commentators have visited the area and mentioned the biological diversity exhibited in the WSA as seen in the variety of wildlife and vegetative species. Many support the boundary adjustment alternative which would designate an area slightly larger than the WSA. Others mentioned that with wilderness designation any oil and gas development allowed would occur with greater restrictions and that post-FLPMA leases on two-thirds of the WSA would not be developed, thus protecting much of the area in a natural state. Many stated that because the area is an undeveloped island surrounded by oil and gas development is reason enough to protect it as wilderness.

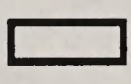


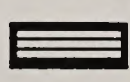


Those opposing wilderness designation generally feel that there is enough or too much designated wilderness now and favor other uses (oil and gas development) for the WSA. The Rio Blanco County Commissioners are opposed to any further wilderness designation within Rio Blanco County. No other federal, state, or local government agencies commented specifically on Oil Spring Mountain.

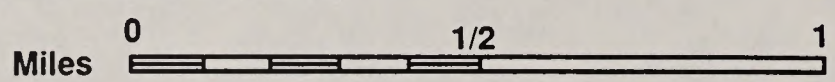


Photo 2. Oil Spring Mountain WSA. View northwest over the WSA from the top of Oil Spring Mountain.



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|  | RECOMMENDED FOR WILDERNESS |  | SPLIT ESTATE (NONE) |
|  | RECOMMENDED FOR NONWILDERNESS (NONE) |  | STATE (NONE) |
|  | LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS. (NONE) |  | PRIVATE (NONE WITHIN THE WSA) |



Platte River Contiguous WSA
Proposal
CO-010-104

January 1991

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PLATTE RIVER CONTIGUOUS WILDERNESS STUDY AREA

The Study Area – 30 acres

The Platte River Contiguous WSA (CO-010-104) is located in Jackson County approximately 18 miles north of Walden, Colorado. The WSA includes 30 acres of BLM lands. The area is bordered by the Platte River Wilderness Area to the east which is managed by the U.S. Forest Service. Undeveloped private land borders the WSA to the north and a small amount of undeveloped BLM land borders the west and south boundaries. The WSA is shown on the map.

This WSA includes about .25 miles of the west side of the North Gate Canyon of the North Platte River. This portion of the canyon's rim which is a part of the viewshed of the adjacent 23,000-acre Platte River Wilderness Area. The adjacent wilderness area is bisected by the North Platte River and associated perennial and intermittent stream drainages. Within the WSA, north facing alcoves support small stands of Douglas fir trees with the remaining area supporting semi-arid vegetation of pinyon pine, juniper trees, sagebrush, and associated grasses and forbs.

There are many rock outcrops and boulders strewn along the canyon rim. There are no impacts of humans within the WSA since the steep, east facing slopes of the canyon are not compatible with any resource development or uses.

The WSA was studied under section 202 of the Federal Land Policy and Management Act (FLPMA) and was included in the Craig District Wilderness Final Environmental Impact Statement (EIS) published November 5, 1990. Two alternatives were analyzed in the EIS, no wilderness and all wilderness (30 acres which is the recommendation of the report).

Recommendations and Rationale

30 acres recommended for wilderness

0 acres recommended for nonwilderness

The recommendation is to designate approximately 30 acres of BLM public land as wilderness to become part of the adjacent Platte River Wilderness Area. The environmentally preferable alternative is this recommendation because it would result in the least change from the natural environment over the long term.

The area is recommended because it contains a portion of North Gate Canyon through which the North Platte River runs. The WSA is a part of the viewshed of the adjacent wilderness area. The North Platte River provides primitive types of recreation activities including whitewater rafting, fishing, and camping.

The proximity of the adjacent 23,000-acre wilderness with North Gate Canyon and the North Platte River are fundamental to the WSAs suitability for wilderness designation. From the canyon rim in the WSA, the visitor has spectacular views of the North Gate Canyon, the river, forested mountains and valleys in the wilderness area and to the south and west (outside the WSA) North Park and surrounding mountain peaks.

Table 1 - Land Status and Acreage Summary of the Study Area

<u>Within Wilderness Study Area</u>	<u>Acres</u>
BLM (surface and subsurface)	30
Split Estate (BLM surface only)	0
Inholdings (state, private)	<u>0</u>
Total	30
<u>Within the Recommended Wilderness Boundary</u>	
BLM (within WSA)	30
BLM (outside WSA)	0
Split Estate (within WSA)	<u>0</u>
Total BLM Land Recommended for Wilderness	30
Inholdings (state, private)	0
<u>Within the Area Not Recommended for Wilderness</u>	
BLM	0
Split Estate	<u>0</u>
Total BLM Land Not Recommended for Wilderness	0
Inholdings (state, private)	0

Criteria Considered in Developing the Wilderness Recommendations

WILDERNESS CHARACTERISTICS

Naturalness

The Platte River Contiguous WSA is natural with no human imprints. The WSA includes about .25 miles of the west side of the North Gate Canyon of the North Platte River. This portion of the canyon's rim is a part of the viewshed of the adjacent Platte River Wilderness Area. The adjacent Platte River Wilderness is bisected by the North Platte River and associated perennial and intermittent streams. Within North Gate Canyon, elevations from the river to ridgetops range from 7,760 feet to nearly 8,500 feet. Elevations within the WSA range from 8,340 feet at its high point, a rock knob on the canyon rim, and

descends to 7,980 feet along the west boundary within the canyon. This is about 160 feet above the North Platte River.

Within the WSA, north facing alcoves support small stands of Douglas fir trees where shaded areas retain snow and moisture. The remaining areas within the WSA are quite arid. Isolated pinyon pine and juniper trees grow along the canyon rim among rock outcrops and boulders. Clumps of sagebrush, rabbitbrush, and associated grasses and forbs provide sparse ground cover due to exposed rock and shallow soils.

There are no imprints of humans within the WSA since the west boundary follows the highest contour along the canyon rim and includes the steep, rocky, east facing slopes of North Gate Canyon.



Photo 1. Platte River Contiguous WSA. Winter view into North Gate Canyon and the North Platte River (lower left).

Solitude

Since the WSA is only 30 acres in size, it is dependent on the adjacent Platte River Wilderness and North Gate Canyon for outstanding opportunities for solitude. The configuration of the rugged landscape, deep canyon, forested lands, and expansive views provide outstanding opportunities to experience solitude.

Primitive and Unconfined Recreation

Since the WSA is only 30 acres in size, it does not provide outstanding opportunities for primitive and unconfined recreation. However, the WSA is a dependent part of the North Gate Canyon and adjacent Platte River Wilderness Area which does support a variety of nonmotorized recreation activities including whitewater rafting, hiking, camping, fishing and climbing in a primitive setting. The WSA also includes a significant part of the wilderness area's viewshed, the North Gate Canyon, where these activities occur. When considered with the adjacent wilderness area, the opportunities for primitive and unconfined recreation are outstanding.

Special Features

The proximity of the adjacent 23,000 acre U.S. Forest Service Platte River Wilderness and North Gate Canyon (which includes the 30-acre WSA) and the North Platte River (which is a popular Class IV whitewater floatboating attraction) are fundamental to the WSA's suitability for wilderness designation. From the canyon rim (including the WSA), the visitor has spectacular views of the North Gate Canyon, the North Platte River, forested mountains and valleys, and to the south and west, North Park and surrounding mountain peaks.

DIVERSITY IN THE NATIONAL WILDERNESS PRESERVATION SYSTEM

Assessing the diversity of natural systems and features as represented by ecosystems

Wilderness designation of this WSA would not add a new landform or ecosystem to the National Wilderness Preservation System. The WSA is in the Rocky Mountain Forest Province and contains a Douglas fir forest ecosystem. This ecosystem is represented in the NWPS by the adjacent Platte River Wilderness (mostly in Wyoming with 22,239 acres) and an additional 18 designated areas with 1,349,971 acres in other states. (See Table 2)

Table 2 - Ecosystem Representation

<u>Bailey-Kuchler Classification</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
Province/Potential Natural Vegetation	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
<i>Nationwide</i>				
<u>Rocky Mountain Forest Province</u>				
Douglas Fir Forest	18	1,349,971	23	199,380
<u>Rocky Mountain Forest Province</u>				
<i>Colorado</i>				
Douglas Fir Forest	0	0	0	0

Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers

areas and other BLM study areas within a 5-hour drive of the population centers.

The Platte River Contiguous WSA is within a day's drive of 4 major population centers. Table 3 summarizes the number and acreage of designated

Table 3 - Wilderness Opportunities for Residents of Major Populations Centers

<u>Population Center</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
Denver	20	1,728,410	21	372,010
Boulder	20	1,728,410	21	372,010
Fort Collins	20	1,598,113	14	150,539
Greeley	20	1,598,113	14	150,539

Balancing the geographic distribution of wilderness areas

The Platte River Contiguous WSA would not contribute to balancing the geographic distribution of areas within the National Wilderness Preservation System. The WSA is adjacent to the 23,000-acre Platte River Wilderness Area managed by the USDA Forest Service. There are 2 other wilderness

areas nearby; Mt. Zirkel (139,818 acres) some 25 miles to the west and Rawah (73,020 acres) some 25 miles to the southeast. There is 1 BLM study area, Troublesome, some 60 miles to the south; however, this WSA is not recommended for wilderness designation.

MANAGEABILITY

The Platte River Contiguous WSA can be effectively managed to preserve its wilderness character. The WSA is adjacent to the 23,000-acre Platte River Wilderness and would become a part of this area. Management of this BLM parcel would be assumed by the USDA Forest Service under agreement with the BLM to be managed with the adjacent wilderness area. There are no resource conflicts that would hinder management of the Platte River Contiguous WSA as wilderness.

ENERGY AND MINERAL RESOURCE VALUES

The Platte River Contiguous WSA has low mineral resource potential for undiscovered fluorspar, beryl, mica, columbite-tantalite, copper, uranium, and geothermal energy. The BLM lands adja-

cent to the North Gate Canyon and outside the WSA includes several old exploration pits and trenches that were worked for vermiculite. The WSA also lies adjacent to the North Gate Fluorspar District. No mining claims currently exist on the WSA or on surrounding BLM land. No commercial grade vermiculite has been found at any of the areas.

There are no pre-FLPMA oil and gas leases in the WSA nor would any leasing be likely to occur due to Precambrian bedrock. Hence, no mineral exploration or development is anticipated.

IMPACTS ON RESOURCES

The following comparative impact table (Table 4) summarizes the effects on pertinent resources for the 2 alternatives for this WSA.

Table 4 - Comparative Summary of the Impacts by Alternative

Impact Topics	Recommendation: All Wilderness Alternative	No Wilderness Alternative
<i>Impacts on Wilderness Characteristics</i>	<i>Opportunities for solitude, primitive and unconfined recreation, and the naturalness of the area would be protected on 30 acres. This would also provide legislative protection on these 30 acres of the viewshed of the contiguous Platte River Wilderness Area.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, and the naturalness of the area would be protected on the 30 acres. This would also provide administrative protection on these 30 acres of the viewshed of the contiguous Platte River Wilderness Area.</i>
<i>Impacts on Ranching Operations</i>	<i>Due to the absence of forage, livestock forage production within the WSA would be unaffected.</i>	<i>Due to the absence of forage, livestock forage production within the WSA would be unaffected.</i>
<i>Impacts on Recreation Use and Quality</i>	<i>Recreational use levels are expected to remain at current levels of 10 visitor days per year.</i>	<i>Recreational use levels are expected to remain at current levels of 10 visitor days per year.</i>
<i>Impacts on Water Quality</i>	<i>No impacts to water quality would occur.</i>	<i>No impacts to water quality would occur.</i>
<i>Impacts on Big Game Species (Population and Habitat) and Eagles</i>	<i>No wildlife species would be impacted.</i>	<i>No wildlife species would be impacted.</i>

Table 4 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: All Wilderness	No Wilderness Alternative
<i>Impacts to Mineral Exploration and Production</i>	<i>Since there is no current interest in any mineral resources in the WSA, no mineral development is anticipated to be foregone.</i>	<i>Since there is no current interest in any mineral resources in the WSA, no mineral development is anticipated to be foregone.</i>
<i>Impacts on Private Lands</i>	<i>No impacts to state or private lands are anticipated.</i>	<i>No impacts to state or private lands are anticipated.</i>

LOCAL SOCIAL AND ECONOMIC CONSIDERATIONS

Designation or nondesignation of this WSA as wilderness would have negligible impacts on local economic conditions. Social factors were not considered a significant issue in the study.

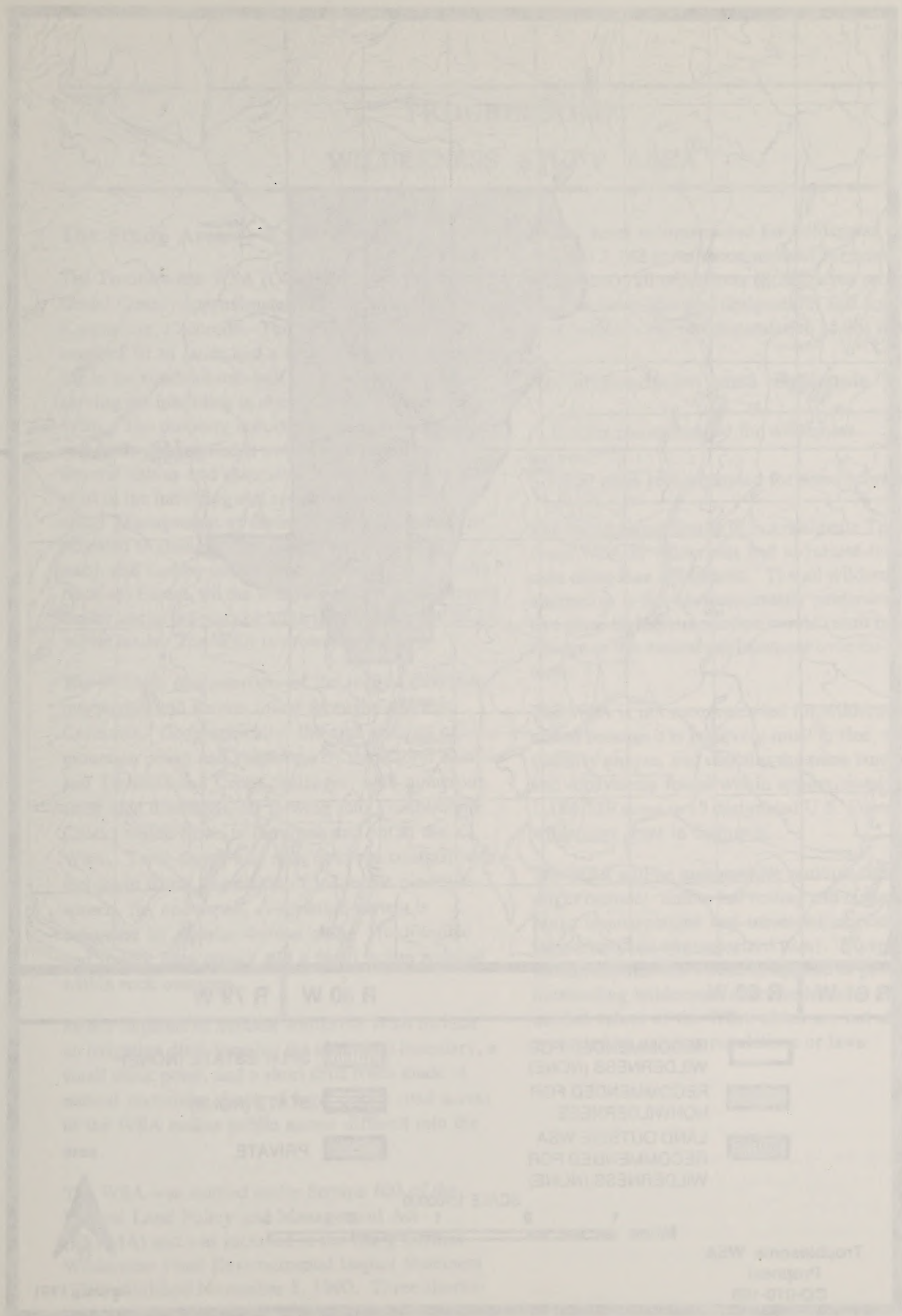
SUMMARY OF WSA SPECIFIC PUBLIC COMMENTS

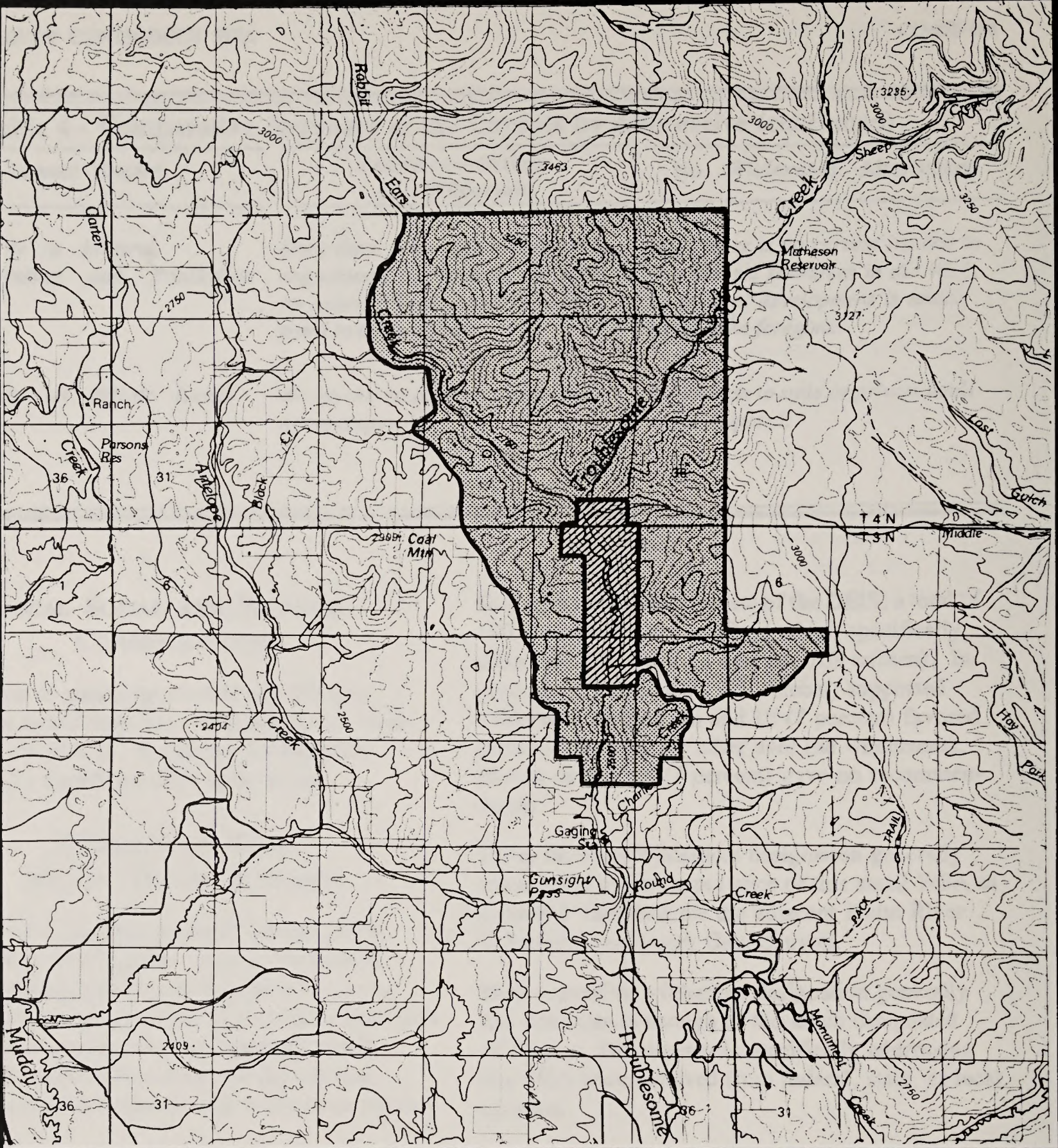
Public involvement has occurred throughout the wilderness review process. Certain comments reviewed during the inventory process and early stages of the Draft Environmental Impact Statement (DEIS) were used to develop significant study issues and various alternatives for the ultimate management of those lands with wilderness values.

During formal public review of the DEIS, a total of 160 comments were received which specifically addressed this WSA (51 oral and 109 written). In general, 137 comments (86 percent) supported wilderness designation and 12 (7 percent) favored releasing the area for other uses (no wilderness). Eleven comments (7 percent) gave no recommendation.

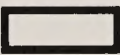


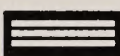

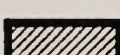
Those favoring wilderness designation generally commented on the importance of this small WSA as protected viewshed for the adjacent Platte River Wilderness and North Gate Canyon.

Those opposing wilderness designation generally feel that there is enough or too much designated wilderness. No comments specifically addressing this WSA were received from federal, state, or local agencies.

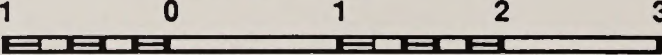





R 81 W | R 80 W | R 80 W | R 79 W

	RECOMMENDED FOR WILDERNESS (NONE)		SPLIT ESTATE (NONE)
	RECOMMENDED FOR NONWILDERNESS		STATE (NONE)
	LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS.(NONE)		PRIVATE

SCALE 1:100000

Miles 

Troublesome WSA
Proposal
CO-010-155


N

January 1991

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T 3 N

TROUBLESOME WILDERNESS STUDY AREA

The Study Area -- 8,250 acres

The Troublesome WSA (CO-010-155) is located in Grand County approximately 18 miles north of Kremmling, Colorado. The WSA includes 8,250 acres of BLM lands and a 625-acre private inholding in the southern one-half of the WSA. A road serving the inholding is cherry-stemmed from the WSA. The property is currently used for recreation and cattle grazing and is owned by 8 families. Several cabins and associated minor developments exist in the inholding and are noticeable within this area. Management of these private lands is not anticipated to change. The area is bounded on the north and east by undeveloped lands of the Arapaho National Forest, on the south by undeveloped private lands, and to the west by an irrigation ditch and BLM public lands. The WSA is shown on the map.

The WSA is characteristic of the rugged mountainous terrain and forests found throughout central Colorado. Geographically, the area consists of mountain peaks and ridges cut by the Rabbit Ears and Troublesome Creek drainages, with numerous steep side drainages, all flowing into Troublesome Creek, which flows to the south and out of the WSA. Talus slopes and rock outcrops contrast with the dense forest vegetation of lodgepole pine, spruce, fir, and aspen. Vegetative variety is enhanced by riparian habitat along Troublesome and Rabbit Ears creeks and a fungi lichen ecotone within rock outcrops.

Minor imprints of humans within the WSA include an irrigation ditch forming the northwest boundary, a small stock pond, and a short drift fence made of natural materials. Lack of legal public road access to the WSA makes public access difficult into the area.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Craig District Wilderness Final Environmental Impact Statement (EIS) published November 5, 1990. Three alternatives were analyzed in the EIS; partial wilderness

(6,102 acres recommended for wilderness designation and 2,148 acres recommended for non-wilderness), all wilderness (8,250 acres recommended for wilderness designation) and no wilderness, which is the recommendation of this report.

Recommendation and Rationale

0 acres recommended for wilderness

8,250 acres recommended for nonwilderness

The recommendation is to not designate Troublesome WSA as wilderness and to release the area for uses other than wilderness. The all wilderness alternative is the environmentally preferable alternative since its implementation would result in the least change to the natural environment over the long term.

The WSA is not recommended for wilderness designation because it is relatively small in size, not particularly unique, and contains the same landforms and ecosystems found within approximately 1,186,539 acres in 15 designated U.S. Forest Service wilderness areas in Colorado.

The WSA will be managed for multiple uses which might include: timber harvesting and management, range improvements and increased recreation use (motorized and nonmotorized uses). No specific or special stipulations would be applied to protect the outstanding wilderness characteristics or other natural values of the WSA which are not already protected by existing regulations or laws.

Table 1 - Land Status and Acreage Summary of the Study Area

<u>Within Wilderness Study Area</u>	<u>Acres</u>
BLM (surface and subsurface)	8,250
Split Estate (BLM surface only)	0
Inholdings (state, private)	<u>625</u>
Total	8,875
<u>Within the Recommended Wilderness Boundary</u>	
BLM (within WSA)	0
BLM (outside WSA)	0
Split Estate (within WSA)	0
Total BLM Land Recommended for Wilderness	<u>0</u>
Inholdings (state, private)	0
<u>Within the Area Not Recommended for Wilderness</u>	
BLM	8,250
Split Estate	<u>0</u>
Total BLM Land Not Recommended for Wilderness	8,250
Inholdings (state, private)	625

Criteria Considered in Developing the Wilderness Recommendations

WILDERNESS CHARACTERISTICS

Naturalness

The Troublesome WSA is predominately natural with negligible human imprints. The area contains rugged, mountainous terrain ranging in elevation from 8,100 feet on Troublesome Creek on the southern boundary to over 11,100 feet on the northern boundary. This is the highest BLM public land in the Craig District. A rock slide and rock outcrops contribute to the ruggedness of the WSA.

The area is covered mostly with dense forest of lodgepole pine, spruce, fir, and aspen. Vegetative

diversity is enhanced by riparian habitat along Troublesome and Rabbit Ears creeks and a fungi lichen ecotone within rock outcrops.

The area is cut by Troublesome Creek which is a perennial stream that drains the entire WSA. Both Troublesome and Rabbit Ears creeks support trout fisheries. Beaver ponds occur on public land portions of Rabbit Ears Creek which are also conducive to trout populations. Aquatic and riparian habitats are good in both streams.

Troublesome also supports big game including elk and deer which inhabit the area primarily during the summer months. No golden eagle or other raptor nests are known to occur in the WSA, however, a thorough raptor inventory has not been done in the WSA and raptors undoubtedly occupy the WSA.

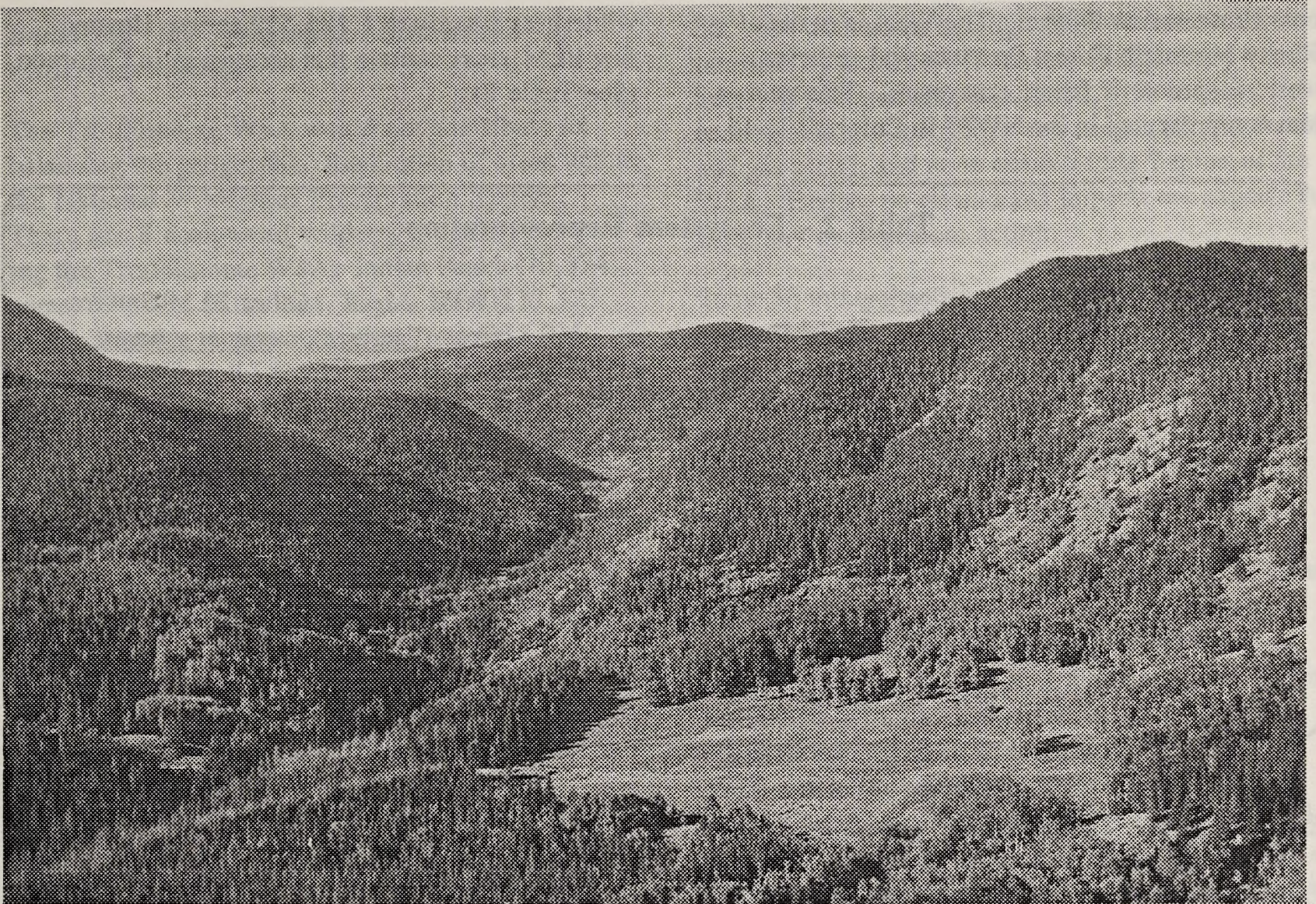


Photo 1. Troublesome WSA. Overview of Troublesome WSA.

Minor imprints of humans found within the WSA include an irrigation ditch which forms the north-western boundary, a small stock pond, and a short drift fence made of natural materials. These range improvements are small, scattered, and substantially unnoticeable within the WSA.

Solitude

Topographic and vegetative screening combine to provide outstanding opportunities to experience solitude. The drainages of Rabbit Ears and Troublesome Creeks, their numerous side drainages and intervening ridges screen visitors from others and provide opportunities to become isolated. These opportunities are enhanced by the dense forest and riparian vegetation. Expansive views from high points in the northern portion of the WSA enhance the sense of vastness and remoteness which reinforces the feeling of solitude. Activities occurring within the private inholding could affect the opportunities for solitude on lands immediately adjacent to the inholding. However, the vast majority of the WSA is topographically screened from the inholding.

Primitive and Unconfined Recreation

Troublesome WSA offers outstanding opportunities for users to participate in primitive and unconfined recreational activities. Activities such as hiking, hunting, fishing, wildlife viewing, backpacking, nontechnical rock climbing, and scenic viewing now occur within the WSA. However, use is low due to lack of legal public road access to the south and western portions of the WSA. Legal road access to this area is planned, however.

Special Features

No special features have been identified in this WSA.

DIVERSITY IN THE NATIONAL WILDERNESS PRESERVATION SYSTEM

Assessing the diversity of natural systems and features as represented by ecosystems

Wilderness designation of this WSA would not add a new ecosystem or landform to the National Wilder-

ness Preservation System. The WSA is in the Rocky Mountain Forest Province and contains a western spruce-fir forest ecosystem. This ecosystem is represented in the NWPS in Colorado in 15

wilderness areas with 1,186,539 acres. However, few BLM areas contain this ecosystem in Colorado. (See Table 2)

Table 2 - Ecosystem Representation

<u>Bailey-Kuchler Classification</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
<u>Province/Potential Natural Vegetation</u>	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
<i>Nationwide</i>				
<u>Rocky Mountain Forest Province</u>				
Western Spruce-Fir Forest	41	4,756,981	9	64,171
<i>Colorado</i>				
<u>Rocky Mountain Forest Province</u>				
Western Spruce-Fir Forest	15	1,186,539	3	15,765

Expanding the Opportunities for Solitude or Primitive Recreation within a Day's Driving Time (Five Hours) of Major Population Centers

The Troublesome WSA is within a day's drive of 5 major population centers. Table 3 summarizes the

number and acreage of designated areas and other BLM study areas within a 5-hour drive of the population centers.

Table 3 - Wilderness Opportunities for Residents of Major Population Centers

<u>Population Center</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
Denver	20	1,728,410	21	372,010
Boulder	20	1,728,410	21	372,010
Fort Collins	20	1,598,113	14	150,539
Greeley	20	1,598,113	14	150,539
Colorado Springs	19	1,845,350	19	336,925

Balancing the geographic distribution of wilderness areas

The Troublesome WSA would not contribute to balancing the geographic distribution of areas within the National Wilderness Preservation System.

There are 8 designated wilderness areas surrounding the Troublesome WSA: Indian Peaks (70,374 acres) 25 miles to the east, Eagles Nest (133,325 acres) 30 miles to the south; Flat Tops (235,035 acres) 50 miles to the southwest; Mt. Zirkel (139,818 acres) 30 miles to the northwest; Platte River (23,000 acres) 60 miles to the north; Rawah (73,020 acres) 35 miles to the northeast; Neota (9,924 acres) and Never Summer (13,702 acres) 30 miles the northeast. There are 3 BLM WSAs some 50 miles to the southwest and one BLM WSA (Platte River Contiguous, 30 acres) some 60 miles to the north.

MANAGEABILITY

The Troublesome WSA could be effectively managed to preserve its wilderness character. The WSA is bordered on the north and east by Arapaho National Forest lands. Present management of the national forest lands would not interfere with wilderness management of the Troublesome WSA. Present management of the 625-acre private inholding for cattle grazing and recreation is compatible with wilderness management of the adjacent Troublesome area. The inholding contains several cabins and other minor developments that are used by 8 owners of this property. There are no plans to expand or develop the inholding any further as it is the intent of the owners to retain the natural character of the valley in which the private land lies. The mineral estate is in federal ownership for all of the WSA including the private inholding. There are no other resource conflicts that would hinder management at the Troublesome WSA as wilderness.

ENERGY AND MINERAL RESOURCE VALUES

The Troublesome WSA has no potential for oil and gas development and low potential for development of other minerals. Troublesome WSA has no potential for oil and gas mineral development in the foreseeable future due to the nature of the areal geology. Limited oil and gas drilling and interest has occurred in the surrounding area, although the WSA

has been defined as having unknown petroleum potential by the USGS (Spencer, 1982). Only 4 drill-holes, all plugged and abandoned, exist in the encompassing 4 townships and ranges (Colorado oil and gas plats), and none occur within 2 miles of the WSA. Hence, no oil and gas impacts are expected from any management action.

Some 86 mine claims have previously existed in sections wholly or partially within the WSA. Although none of these claims currently is active, this indicates that some locatable mineral interest has been present in the area (BLM mining claim records, June, 1988). In 1954 the Atomic Energy Commission (AEC) drilled 98 exploration holes, averaging 30 feet deep, for uranium mineralization nearby (Township 2 North, Range 79 West). Private firms drilled an additional 125 holes, averaging 60 feet deep, at this same time (Main, 1957). The target of this exploration was the basal Troublesome Formation, a fluvial, lacustrine, and volcanoclastic sedimentary sequence overlying the Tertiary Volcanics in the Middle Park-Rabbit Ears Range area. The uranium minerals appeared to be associated with sandstone lenses and organic material. The Troublesome Formation has not been mapped in the WSA, but there is a distinct possibility that similar settings (sandstone, ash, and organic material) with potential for uranium mineralization could exist within the WSA.

No commercial mining or mineral extraction of uranium-bearing rocks has occurred in the area, nor are any active claims present in or adjacent to the WSA. This combined with low uranium demand, industry surpluses, and readily obtainable low-cost material elsewhere indicates that uranium values in the area are minimal.

Ample sand and gravel pits occur throughout the region, with minimal transport distances to major roads and users, negating the value of such material within the WSA. No other known mineralization or mineral interest occurs in or near the WSA, and mineral values are thought to be nominal.

IMPACTS ON RESOURCES

The following comparative impact table (Table 4) summarizes the effects on pertinent resources for the 3 alternatives for this WSA.

Table 4 - Comparative Summary of the Impacts by Alternative

Impact Topics	Recommendation: No Wilderness Alternative	Partial Wilderness Alternative	All Wilderness Alternative
<i>Impacts on Wilderness Characteristics</i>	<i>Opportunities for solitude and naturalness would be lost on about 2,148 acres through forest management activities, range improvement projects, and off-road vehicle use.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, and the naturalness of the area would be protected on 6,102 acres under this alternative. These wilderness values would be lost on 2,148 acres of the original WSA.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, and the naturalness of the area would be protected on the entire 8,250-acre WSA.</i>
<i>Impacts on Forest Management</i>	<i>Forest management activities would harvest 363 acres (approximately 2.9 million board feet) and manage approximately 1,872 acres of the WSA for the production of forest products.</i>	<i>Forest management activities would harvest 363 acres (approximately 2.9 million board feet) and manage approximately 1,872 acres of the WSA for the production of forest products. Forest management activities would be precluded on 6,102 acres.</i>	<i>No timber harvesting would take place in the 8,250-acre WSA.</i>
<i>Impacts on Ranching Operations</i>	<i>Livestock forage production would increase by 208 Animal Unit Months (AUMs) from a current level of 730 to 938 AUMs.</i>	<i>Livestock forage production within the proposed wilderness area would remain at current levels of 540 AUMs (938 AUMs within the original WSA). Vehicle use for maintenance of improvements would be subject to the restrictions of BLM's Wilderness Management Policy. The area not proposed for wilderness would increase forage production by 200 AUMs as a result of new range improvement projects.</i>	<i>Livestock forage production would remain at the current levels of 730 AUMs. Motor vehicle use restrictions for range project maintenance would slightly increase the cost of keeping cattle on the WSA, although the use of motorized equipment may be allowed under specific conditions for individual projects.</i>

Table 4 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: No Wilderness Alternative	Partial Wilderness Alternative	All Wilderness Alternative
<i>Impacts on Recreation Use and Quality</i>	<i>Total recreation use levels would increase from a current level of 1,750 visitor days to approximately 5,000 visitor days per year. Motorized vehicle use associated with hunting and fishing would increase from 10 to 1,000 visitor days per year. This increase along with proposed forest and range management activities, would cause opportunities for primitive types of recreation to be lost over most of the WSA.</i>	<i>Recreation use levels would increase from a current level of 1,750 visitor days per year to 6,000 visitor days per year on the area recommended suitable. Motor vehicle use within this area would be prohibited and opportunities for primitive and unconfined recreation would remain unchanged. Motorized vehicle use associated with hunting and fishing would increase to 1,000 visitor days per year outside of the proposed wilderness. The area outside the proposed wilderness would lose opportunities for primitive recreation due to development of other resources and an increase of motorized traffic.</i>	<i>Primitive recreation opportunities would remain unchanged. Nonmotorized forms of recreation would increase from a current level of 1,750 visitor days per year to about 6,000 visitor days per year. Motorized vehicle use would be prohibited.</i>
<i>Impacts on Water Quality</i>	<i>There could be short-term (2 or 3 years) increase of up to 3.5 percent in sediment yield, with long-term increases of up to 2 percent from the WSA. Salt production within the WSA could also increase by about 1 percent.</i>	<i>There could be short-term (2 to 3 years) increase of up to 3.5 percent in sediment yield, with a long-term increase of up to 2 percent from the WSA. Salt production within the WSA could also increase about 1 percent.</i>	<i>Sediment yield and salt production from the WSA would remain unchanged.</i>
<i>Impacts on Big Game Species (Populations and Habitat) and Eagles</i>	<i>Up to 17 of the approximately 115 deer and 6 of the approximately 40 elk presently using the WSA would be displaced. No impacts to fisheries are anticipated. There would be no impacts to golden eagles or other raptors.</i>	<i>Up to 17 of the approximately 115 deer and 6 of the approximately 40 elk presently using the WSA would be displaced. No impacts to fisheries are anticipated. There would be no impacts to golden eagles or other raptors.</i>	<i>Up to 11 of the approximately 115 deer and 4 of the approximately 40 elk presently using the WSA would be displaced. No impacts to fisheries are anticipated. There would be no impacts to golden eagles or other raptors.</i>

Table 4 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: No Wilderness Alternative	Partial Wilderness Alternative	All Wilderness Alternative
<i>Impacts on Mineral Exploration and Production</i>	<i>The WSA (8,250 acres) would be open to leasing and mining claims, but due to the low interest in known mineral resources within the WSA, no development is anticipated.</i>	<i>The 2,148 acres of the excluded portion of the WSA would be reopened to leasing and mining claims. The portion of the WSA to be retained as wilderness (6,102 acres) would be closed to all mineral entry. No development on either portion is anticipated, due to low interest in known mineral resources.</i>	<i>The WSA (8,250 acres) would be closed to mining claims and mineral leasing, but no development is anticipated without wilderness designation because of the low interest in known mineral resources. Therefore, no impact to mineral development is likely to occur.</i>
<i>Impacts on Private Lands</i>	<i>No impact or change in ownership of 625 acres of private land within the WSA is anticipated.</i>	<i>No impact or change in ownership of 625 acres of private land within the WSA is anticipated.</i>	<i>No impact or change in ownership of 625 acres of private land within the WSA is anticipated.</i>

LOCAL SOCIAL AND ECONOMIC CONSIDERATIONS

Designation or nondesignation of this WSA as wilderness would have negligible impacts on local economic conditions. Social factors were not considered a significant issue in the study.

SUMMARY OF WSA SPECIFIC PUBLIC COMMENTS

Public involvement has occurred throughout the wilderness review process. Certain comments reviewed during the inventory process and early stages of the Draft Environmental Impact Statement (DEIS) were used to develop significant study issues and various alternatives for the ultimate management of those lands with wilderness values.

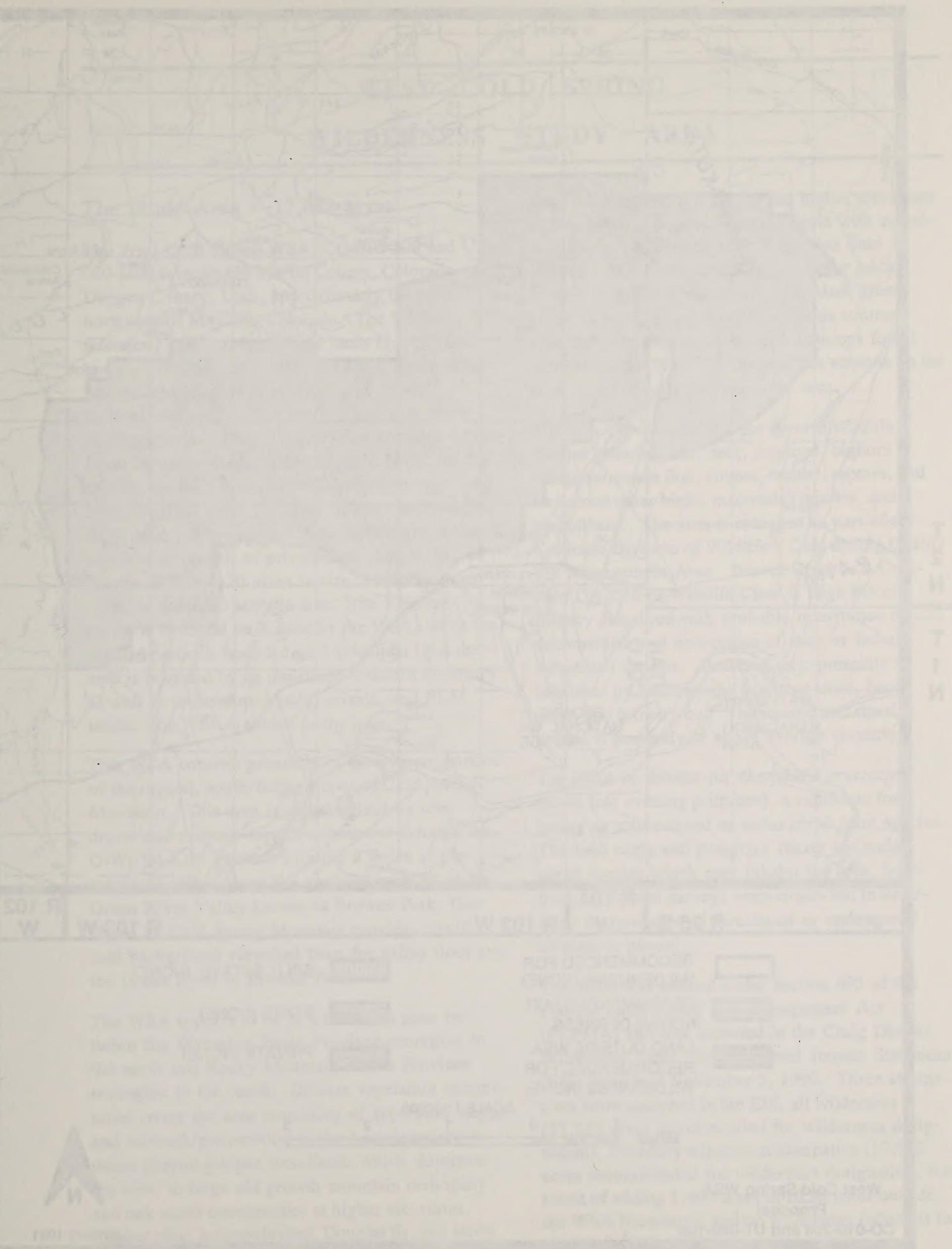
During formal public review of the DEIS, a total of 172 oral and written comments were received which specifically addressed this WSA (55 oral and 117 written). In general, 151 comments (88 percent) supported wilderness designation and 14 (8 percent) favored releasing the area for other uses

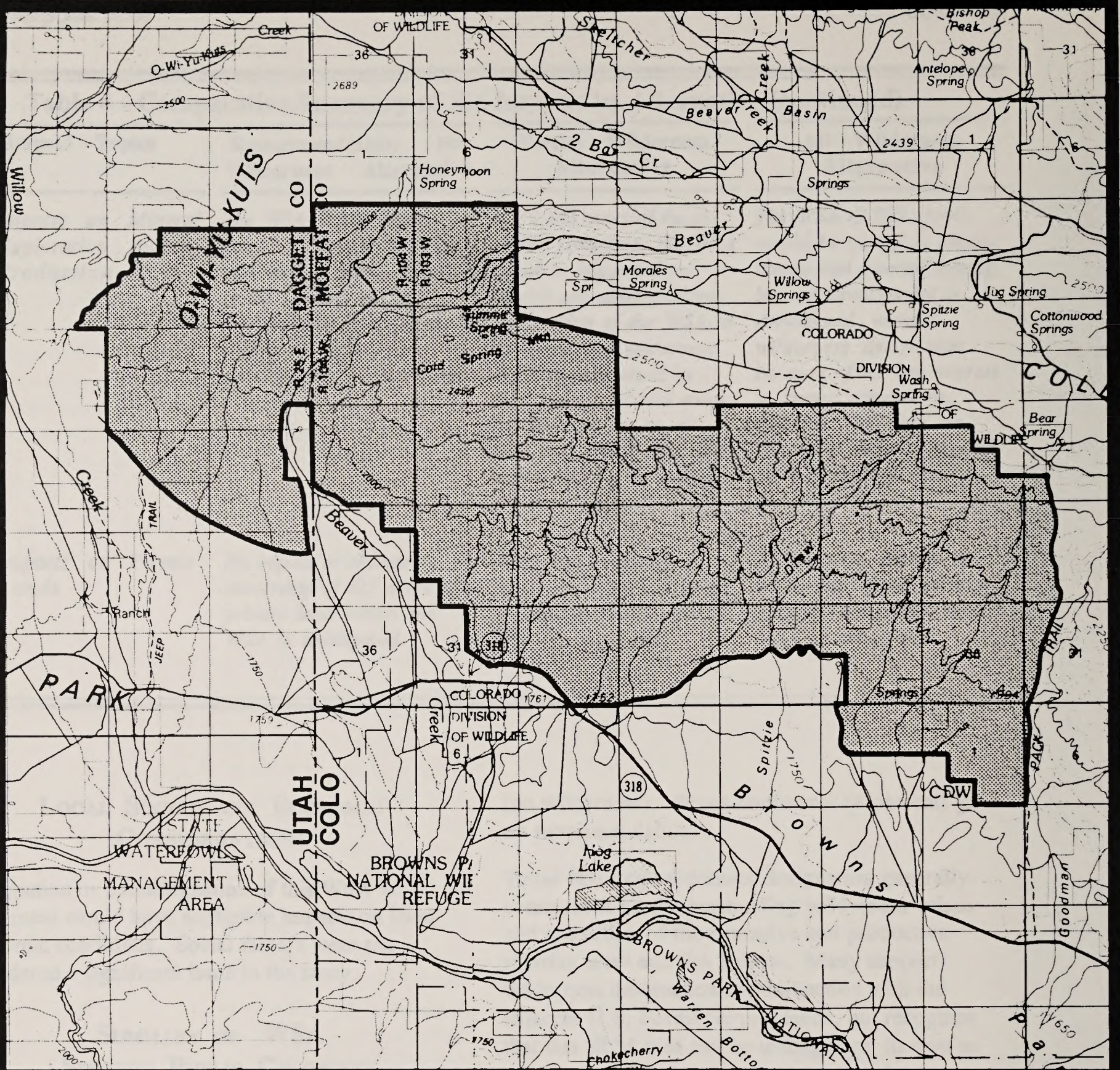
(no wilderness). Seven comments (4 percent) gave no recommendation.

Those favoring wilderness designation generally commented on the outstanding wilderness values and protection of the extensive and productive riparian areas and fish habitat. Many support wilderness designation in conjunction with the adjacent U.S. Forest Service lands, but recognize that this BLM area can be managed on its own as wilderness. Many comments mention the exceptional beauty of this forested and mountainous WSA. Other comments note the marginal value of the timber in the Troublesome WSA. The owners of the 625-acre inholding favor wilderness designation because they do not want resource development to occur adjacent to their property.

Those opposing wilderness designation generally feel that there is enough or too much designated wilderness now and favor other use for the WSA such as logging and grazing livestock.

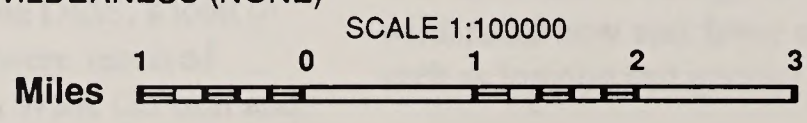
No comments specifically addressing this WSA were received from federal, state, or local agencies.





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| <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <div style="border: 1px solid black; width: 40px; height: 15px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 40px; height: 15px; background-color: #cccccc; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 40px; height: 15px; background-image: linear-gradient(to right, black 1px, transparent 1px); background-size: 10px 10px; margin-bottom: 5px;"></div> </div> <div style="width: 55%;"> <p>RECOMMENDED FOR WILDERNESS (NONE)</p> <p>RECOMMENDED FOR NONWILDERNESS</p> <p>LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS (NONE)</p> </div> </div> | <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <div style="border: 1px solid black; width: 40px; height: 15px; background-image: linear-gradient(to right, black 1px, transparent 1px); background-size: 5px 10px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 40px; height: 15px; background-image: linear-gradient(to right, black 1px, transparent 1px); background-size: 10px 5px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 40px; height: 15px; background-image: linear-gradient(to right, black 1px, transparent 1px); background-size: 10px 5px; margin-bottom: 5px;"></div> </div> <div style="width: 55%;"> <p>SPLIT ESTATE (NONE)</p> <p>STATE (NONE)</p> <p>PRIVATE (NONE)</p> </div> </div> |
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**West Cold Spring WSA
Proposal**
CO-010-208 and UT-080-103

January 1991

WEST COLD SPRING WILDERNESS STUDY AREA

The Study Area -- 17,682 acres

The West Cold Spring WSA (CO-010-208 and UT-080-103) is located in Moffat County, Colorado, and Daggett County, Utah, approximately 65 miles northwest of Maybell, Colorado. The WSA includes 17,682 acres of BLM lands (14,482 acres in Colorado and 3,200 acres in Utah). There are no private inholdings within the WSA. Several sections and parcels of Colorado and Utah state lands adjoin the WSA. The WSA is bounded on the north by undeveloped state and BLM lands, on the east by the Matt trail (which is closed to motorized travel); on the south by a way through undeveloped BLM lands, Browns Park National Wildlife Refuge, and 2 small parcels of private land. One of these parcels is about 120 acres in size, while the other parcel is about 80 acres in size. The 120 acre parcel is bounded on 3 sides by the WSA, while the 80 acre parcel is bounded on 2 sides. In Utah the area is bounded by an undefined southern boundary as well as undeveloped state, private, and BLM lands. The WSA is shown on the map.

This WSA consists primarily of the western portion of the rugged, south-facing slopes of Cold Spring Mountain. This area is characterized by deep draws and canyons that have been cut through the O-Wi-Yu-Kuts Plateau, forming a series of plateaus and ridges along the northern margins of the Green River Valley known as Browns Park. (See Photo 1) Cold Spring Mountain provides significant background viewshed from the valley floor and the Green River in Browns Park.

The WSA appears to be in a transition zone between the Wyoming Basin Province ecoregion to the north and Rocky Mountain Forest Province ecoregion to the south. Diverse vegetation communities cover the area consisting of sagebrush steppe and saltbush/greasewood in the low elevations to dense pinyon-juniper woodlands which dominate the area, to large old growth mountain mahogany and oak scrub communities at higher elevations. Limber pine, lodgepole pine, Douglas fir, and aspen

trees are scattered throughout the higher elevations with sagebrush steppe occurring again with associated species. Dense riparian vegetation lines Beaver Creek Canyon and Spitzie Draw adding botanic diversity to this WSA. The dark green color of the pinyon-juniper woodlands contrasts with the deep red sandstone rock outcrops found throughout the WSA. A fungi lichen ecotone on the rock outcrops adds interest to the area.

The area provides habitat for diverse wildlife species including elk, deer, antelope, bighorn sheep, mountain lion, coyote, beaver, raptors, and numerous other birds, mammals, reptiles, and amphibians. The area is managed as part of the Colorado Division of Wildlife's Cold Spring Quality Elk Management Area. Beaver Creek is a Colorado Division of Wildlife Class II High Priority Fishery Resource with probable occurrence of and documented past occurrence of state or federal threatened species. Beaver Creek presently is inhabited by Yellowstone cutthroat trout, brook trout, and brown trout. The aquatic and riparian habitat is presently in above average condition.

The WSA is habitat for *Oenothera acutissima* (acute leaf evening primrose), a candidate for listing as a threatened or endangered plant species. The bald eagle and peregrine falcon are endangered species which may inhabit the area, however, no formal surveys were conducted to determine the presence of threatened or endangered animals or plants.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Craig District Wilderness Final Environmental Impact Statement (EIS) published November 5, 1990. Three alternatives were analyzed in the EIS; all wilderness (17,682 acres recommended for wilderness designation), boundary adjustment alternative (19,122 acres recommended for wilderness designation, the result of adding 1,440 acres of BLM lands outside the WSA boundary), and no wilderness (which is the recommendation of this report).

Recommendation and Rationale

0 acres recommended for wilderness

17,682 acres recommended for nonwilderness

West Cold Spring WSA is not recommended for designation as wilderness. The area would be released for uses other than wilderness. The boundary adjustment alternative, which recommends 19,122 acres for wilderness designation, is the environmentally preferable alternative since its implementation would result in the least change to the natural environment over the long term and provides the best opportunity to protect and preserve the outstanding wilderness values of the western end of Cold Spring Mountain.

During the study phase of the wilderness review process, BLM decided that the area would be best managed in a manner similar to the adjoining BLM lands. For the Colorado portion of the WSA, the

Little Snake Resource Management Plan (RMP), June 1989, outlines management of the area. The management objectives for the area are to maintain and improve the quality of 1) the habitat for elk, mule deer, and bighorn sheep; 2) the fisheries in Beaver Creek; and 3) the recreational opportunities (primarily hunting use). Wildlife habitat management plans and wildlife habitat improvement projects would be developed and implemented to achieve these management objectives for the area. The area would be open to oil and gas and other mineral leasing or claims and development of any mineral resource. Livestock grazing would continue and rangeland improvement projects or vegetation treatments may be authorized. Forest or woodland products may be harvested and realty actions such as rights-of-way, leases, and permits may occur. Recreation use would continue and off-road vehicle use would be allowed on existing roads and trails on about three-fourths of the WSA. About one-fourth of the WSA would be open to off-road vehicle use with no restrictions.



Photo 1. Cold Spring Mountain WSA. View of Cold Spring Mountain/Beaver Creek from Browns Park.

Although BLM recognizes the areas wilderness values, the resource values determined to be most important (livestock grazing, mineral development, and wildlife habitat improvement projects) could be best managed as outlined in the Little Snake RMP. Over the long term, the wilderness values could be irre-

trievably lost. Although there are no special stipulations to protect the wilderness values, any development must be consistent with the management objectives for the area. The Utah portion of the WSA would be under multiple use management with no special stipulations to protect wilderness values.

Table 1 - Land Status and Acreage Summary of the Study Area

<u>Within Wilderness Study Area</u>	<u>Colorado Acreage</u>	<u>Utah Acreage</u>	<u>Total Acreage</u>
BLM (surface and subsurface)	14,482	3,200	17,682
Split Estate (BLM surface only)	0	0	0
Inholdings (state, private)	<u>0</u>	<u>0</u>	<u>0</u>
Total	14,482	3,200	17,682
<u>Within the Recommended Wilderness Boundary</u>			
BLM (within WSA)	0	0	0
BLM (outside WSA)	0	0	0
Split Estate (within WSA)	<u>0</u>	<u>0</u>	<u>0</u>
Total BLM Land Recommended for Wilderness	0	0	0
Inholdings (state, private)	0	0	0
<u>Within the Area Not Recommended for Wilderness</u>			
BLM	14,482	3,200	17,682
Split Estate	<u>0</u>	<u>0</u>	<u>0</u>
Total BLM Land Not Recommended for Wilderness	14,482	3,200	17,682
Inholdings (state, private)	0	0	0

Criteria Considered in Developing the Wilderness Recommendations

WILDERNESS CHARACTERISTICS

Naturalness

The West Cold Spring WSA is predominately natural in character with negligible human imprints.

The WSA consists primarily of the western portion of the rugged, steep, south-facing slopes of Cold Spring Mountain. The mountain trends from west to east-southeast. Most of the area is characterized by steep draws and canyons which have cut the O-Wi-Yu-Kuts Plateau forming a series of plateaus and ridges along the northern margin of the Green River Valley known as Browns Park. Cold Spring Mountain provides a significant background viewshed

from the valley floor and the Green River in Browns Park. The WSA ranges in elevation from 5,800 feet in the southern foothills to over 8,500 feet on the northwestern boundary.

The WSA appears to be in a transition zone between the Wyoming Basin Province ecoregion to the north and the Rocky Mountain Forest Province ecoregion to the south. Diverse vegetative communities cover the WSA consisting of sagebrush steppe, and saltbush/greasewood in the lower elevations to dense old growth pinyon-juniper woodlands, which dominate the WSA, to large old growth mountain mahogany and oakscrub and associated species at higher elevations. Limber pine, lodgepole pine, Douglas fir, and aspen trees are scattered throughout the higher elevations with sagebrush steppe and associated species occurring again. Dense riparian vegetation consisting of cottonwood, willow, boxelder, and associated species are found along Beaver Creek Canyon and in Spitzie Draw. A colorful fungi lichen ecotone is found on the numerous red rock outcrops and rounds out the botanic diversity found throughout the area which complements the visual resource and adds interest to the area.

The area's diversity and unroaded character make it ideal habitat for numerous wildlife species including elk, mule deer, pronghorn antelope, mountain lion, bighorn sheep, raptors, and numerous other birds, mammals, reptiles, and amphibians. Beaver Creek supports an excellent trout fishery and aquatic and riparian habitat is presently in above average condition. Bald eagle and peregrine falcon are potential inhabitants of the WSA. No formal surveys have been conducted to determine the presence of threatened or endangered animals or plants.

Minor imprints of humans within the WSA consist of 1 mile of fence, 1 water tank with pit, 3 developed springs, 1.25 miles of water pipeline, and a cattle trail the length of Beaver Creek Canyon. These imprints are scattered and natural revegetation and topography diminish the impact of these improvements making them substantially unnoticeable within the area.

Solitude

The rugged topography and dense vegetation in the WSA provides a setting which allows outstanding

solitude experiences throughout the WSA. The deep, twisting Beaver Creek Canyon (see Photo 2) and Spitzie Draw create a secluded setting which isolates the visitor. Expansive vistas from the top of the O-Wi-Yu-Kuts Plateau look southward into Browns Park, the Diamond Breaks WSA, Dinosaur National Monument, and on clear days into the High Uinta Mountains in Utah. These views create the sense of vastness, open space and isolation which provide truly outstanding opportunities to experience solitude.

Primitive and Unconfined Recreation

The West Cold Spring WSA offers opportunities for users to participate in and experience primitive and unconfined types of recreation activities which are considered to be outstanding. Activities include hiking, backpacking, fishing, hunting, horseback riding, wildlife viewing, and sightseeing within the large, remote, and rugged terrain of Cold Spring Mountain. The size and blocked configuration of the area enhances the variety and number of places for high quality primitive types of recreation experiences and allows relatively unrestricted movement. The rugged terrain restricts travel to foot or horseback. The WSA is accessible year round from Browns Park.

Special Features

The area is known to possess historic and prehistoric cultural sites varying from Paleo-Indian to more modern Ute and Shoshone tribes. The WSA is also included within the Colorado Division of Wildlife's Cold Springs Quality Elk Management Area. This WSA, along with the Cross Mountain WSA, supports a herd of bighorn sheep.

Beaver Creek is a Colorado Division of Wildlife Class II, High Priority Fishery Resource with probable occurrence of and documented past occurrence of state or federal threatened species. The upper reaches of Beaver Creek once contained a pure strain of Colorado River cutthroat trout, formerly a state-listed threatened species. Beaver Creek presently is inhabited by Yellowstone cutthroat, brook trout, and brown trout. Aquatic and riparian habitats are presently in above average condition.



Photo 2. Cold Spring Mountain WSA. Aerial view into Beaver Creek Canyon.

Cold Spring Mountain is a significant viewshed from Browns Park which is experiencing increased visitor use. No formal surveys have been conducted to determine the presence of threatened or endangered animals. Habitat for *Oenothera acutissima* (acute leaf evening primrose) occurs within the WSA. A known location also occurs at Cold Spring, but it is outside the study area. *O. acutissima* is a "candidate" for listing as a threatened or endangered species and appears on the Federal Register Notice of Review as a category 2 entry. Its habitat is seasonally moist to wet sandy and gravelly soils in meadows (depressions or stream courses) and springs in mixed conifer forests and sagebrush scrub.

Marginal nesting habitat is available for the peregrine falcon. A possible observation of a peregrine falcon was made in 1988 by an employee of the Colorado Division of Wildlife during an aerial survey. This observation was never verified. The bald eagle is also a potential inhabitant.

The WSA appears to be in a transition zone between the Rocky Mountain Forest Province ecoregion and the Wyoming Basin Province ecoregion. There are no other WSAs within Colorado in the Wyoming Basin Province.

DIVERSITY IN THE NATIONAL WILDERNESS PRESERVATION SYSTEM

Assessing the diversity of natural systems and features as represented by ecosystems

Wilderness designation of this WSA would add ecosystems which currently have little or no representation in the National Wilderness Preservation System in Colorado (NWPS). The WSA appears to be in a transition zone between the Rocky Mountain Forest Province and Wyoming Basin Province ecoregions. The area has been classified as having juniper-pinyon woodland potential natural vegetation (12,420 acres) in the Rocky Mountain Forest Province and sagebrush steppe potential natural vegetation (5,262 acres) in the Wyoming

Basin Province. There is only one designated area in Colorado and only 2 areas nationwide with juniper-pinyon woodland. There are no designated wilderness areas in Colorado with Wyoming Basin, sagebrush steppe. A portion of Dinosaur National Monument to the south is representative of the

juniper-pinyon ecosystem and although portions are administratively endorsed for wilderness designation, it is not part of the NWPS. West Cold Spring is the only WSA in Colorado within the Wyoming Basin Province. (See Table 2)

Table 2 - Ecosystem Representation

<u>Bailey-Kuchler Classification</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
Province/Potential Natural Vegetation	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
<i>Nationwide</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-pinyon Woodland	2	41,451	22	167,864
<u>Wyoming Basin Province</u>				
Sagebrush Steppe	1	67,026	17	235,293
<i>Colorado</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-pinyon Woodland	1	11,181	16	119,424
<u>Wyoming Basin Province</u>				
Sagebrush Steppe	0	0	0	0

Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers

The West Cold Spring WSA is within a day's drive of 2 major population centers in Utah and within 6-1/2

hours drive of Denver, Colorado. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a 5-hour drive of the populations centers.

Table 3 - Wilderness Opportunities for Residents of Major Population Centers

<u>Population Center</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
Salt Lake City/ Ogden	11	685,088	42	1,826,904
Provo /Orem	12	730,088	52	2,307,031

Balancing the geographic distribution of wilderness areas

The West Cold Spring WSA would contribute to balancing the geographic distribution of areas within the National Wilderness Preservation System. The nearest designated wilderness is the High Uintas (460,000 acres) some 50 miles to the west in Utah. However, the landforms and ecosystems are entirely different than those found in the WSA and West Cold Spring has year-round access from Browns Park. Part of Dinosaur National Monument to the south has been administratively endorsed for wilderness designation. The Diamond Breaks WSA lies some 4 miles to the south on the opposite side of Browns Park. The West Cold Spring WSA, Diamond Breaks WSA, and Dinosaur National Monument complement each other with different ecosystems, landforms, and opportunities to attain diverse wilderness experiences.

There are an additional 8 BLM study areas within a 1 to 3 hour drive of West Cold Spring. Since this WSA is accessible year round, represents different ecosystems, and provides different recreation opportunities, the area expands opportunities to attain diverse wilderness experiences.

MANAGEABILITY

The West Cold Spring WSA could be effectively managed to preserve its wilderness character. The large, blocked configuration of the area enhances management. There are no pre-FLPMA leases and only one post-FLPMA oil and gas lease, and no mining claims within the WSA. The post-FLPMA oil and gas lease would not be developed if the area was designated as wilderness. Approximately one-half of the WSA is unallotted for grazing. No range improvement projects are planned. The WSA is bordered mostly by undeveloped BLM lands and state lands. The boundary adjustment alternative would enhance management of the area by expanding the boundaries to include areas with wilderness characteristics and acquiring adjacent state lands to be managed as wilderness, thus enhancing a large area with manageable and identifiable boundaries. These boundary adjustments include 1-1/2 miles of Beaver Creek Canyon and Little Beaver Creek Canyon. The northern boundary would follow a ridge line for approximately 4 miles providing an easily identifiable boundary on the ground.

ENERGY AND MINERAL RESOURCE VALUES

The West Cold Spring WSA lies 3 to 4 miles south of the mapped outcrop of the Uinta Fault, a south dipping thrust fault. Geologic mapping of the fault has resulted in differing opinions of its attitude.

There are 3 deep (subthrust) oil and gas exploration drillholes just north of the WSA boundary along an east to west trend. The McMoran-Freeport 43-2a drillhole intersected the Uinta Fault at 8,890 feet, the Champlin-Phillips-Bear Springs 31-19 well intersected the fault at 7,100 feet, and the Amoco Cold Spring #1 drillhole intersected the fault at 9,233 feet. Projecting these Uinta Fault intersections near the WSA to the fault outcrop resulted in an average fault plane angle of about 25 degrees with a projected depth of 9,000 to 16,000 feet below the WSA at the north and south boundaries respectively.

These depths are well within the limits of modern drilling technology and coupled with the oil and gas shows, especially at the Amoco and McMoran-Freeport wells, indicate that there is a moderate potential for oil and gas within the WSA.

The proximity of the WSA to the Uinta Thrust Fault, and to subthrust drill holes that had good oil and gas shows (the Amoco Cold Springs #1 and the McMoran-Freeport 43-2a), indicates that there is a good likelihood that oil and gas exploration would take place in the foreseeable future. The drilling complexities and costs associated with 10,000 to 15,000 feet deep drill holes in overthrust regions would keep such exploration limited to the best possible prospects. This would also probably limit exploration to less than 10 drill holes. Large, producible fields, while possible, are not expected to be discovered in this WSA.

Industry input, interest in oil and gas leasing, and shows of oil and gas in nearby subthrust wells indicate that the foreseeable future could see up to 6 wells drilled in the WSA for exploration purposes. This exploration scenario is only 1 conceivable option, and has been developed for analysis purposes in the Final Wilderness Environmental Impact Statement, but is typical of what could be expected if the WSA is not designated wilderness.

Any development of an oil and gas field would depend on discovering a large enough reservoir of producible oil and gas, favorable market conditions,

and proximity of this field to a pipeline or storage and transportation. No development scenario has been developed due to the highly speculative nature of any exploration successfully fulfilling these criteria.

There are no mining claims, nor are there any reported mineral occurrences within the WSA, although there is minor gold, silver, and copper mineralization in small veins in the region.

Minor hot springs occur west of the WSA, but the area is not considered prospectively valuable for any

leasable mineral resources, other than oil and gas. The distance from any markets for salable mineral resources preclude any uses other than local road or drill pad construction.

IMPACTS ON RESOURCES

The following comparative impact table (Table 4) summarizes the effects on pertinent resources for the 3 alternatives for this WSA.

Table 4 - Comparative Summary of the Impacts by Alternative

Impact Topics	Recommendation: No Wilderness Alternative	Boundary Adjustment Alternative	All Wilderness Alternative
<i>Impacts on Wilderness Characteristics</i>	<i>The wilderness values of naturalness, solitude, and primitive and unconfined recreation would be lost over an estimated 6,000 acres of the 17,682-acre WSA through combined effects of projected activities and uses.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, and the naturalness of the area would be protected and increase on 19,122 acres. Naturalness would be enhanced by allowing existing ways and trails to rehabilitate.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, and the naturalness of the area would be protected on the entire 17,682-acre WSA. Naturalness would be enhanced by allowing existing ways and trails to rehabilitate.</i>
<i>Impacts on Ranching Operations</i>	<i>Livestock forage production would increase by about 159 Animal Unit Months (AUMs) from the current level of 661 AUMs to a total of 820 AUMs. Operating costs associated with range improvement projects would remain at current levels because motor vehicle use would be allowed.</i>	<i>Livestock forage production within the proposed area would remain at current levels of 841 AUMs and at 661 AUMs within the original WSA. Operating costs on grazing allotments within the WSA would be slightly higher where livestock operations could be accomplished reasonably without the use of motorized vehicles.</i>	<i>Livestock forage production within the WSA would remain at current levels of 661 AUMs. Operating costs on grazing allotments within the WSA would be slightly higher where livestock operations could be accomplished reasonably without the use of motorized vehicles.</i>
<i>Impacts on Recreation Use and Quality</i>	<i>Recreation use levels are expected to increase from 1,000 visitor days per year to 1,200 visitor days per year. Motorized vehicle use would increase. Opportunities for primitive and unconfined recreation would be reduced because of development activities and other uses.</i>	<i>Recreation use levels within the proposed wilderness area are expected to increase from 1,000 visitor days to 1,200 visitor days per year. Opportunities for primitive and unconfined recreation would increase in a larger area with a natural setting.</i>	<i>Recreation use levels in the proposed wilderness area are expected to increase from 1,000 visitor days to 1,200 visitor days per year. Opportunities for primitive and unconfined recreation would remain unchanged in a natural setting.</i>

Table 4 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: No Wilderness Alternative	Boundary Adjustment Alternative	All Wilderness Alternative
<i>Impacts on Water Quality</i>	<i>Overall, sediment yields could be increased by 200 percent within 4 percent of the WSA (which would average out to an 8 percent increase throughout the entire WSA) over the short term. In the long term, sediment yields would be decreased by an average of 1.2 percent throughout the WSA. These changes within the WSA would not affect water quality within Beaver Creek or the Green River.</i>	<i>Because no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>	<i>Because no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>
<i>Impacts on Big Game Species (Populations and Habitat) and Eagles</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 265 deer, 17 elk, 10 pronghorn, and 40 to 50 bighorn sheep would remain unchanged.</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 265 deer, 17 elk, 10 pronghorn, 40 to 50 bighorn sheep would remain unchanged.</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 265 deer, 17 elk, 10 pronghorn, and 40 to 50 bighorn sheep would remain unchanged.</i>
<i>Impacts on Mineral Exploration and Production</i>	<i>The area would be open to mineral entry. Oil and gas exploration is expected. No interest in other minerals is expected.</i>	<i>The area would be closed to mineral entry. No potential oil and gas exploration or development would occur. Negative impacts are anticipated to exploration for oil and gas and to collection of subsurface geologic data.</i>	<i>The area would be closed to mineral entry. No potential oil and gas exploration or development would occur. Negative impacts are anticipated to exploration for oil and gas and to collection of subsurface geologic data.</i>
<i>Impacts on Private Lands</i>	<i>No change in ownership or use of federal land is anticipated.</i>	<i>Acquisition of portions of adjoining state lands would be pursued. Current uses of the land would continue.</i>	<i>Acquisition of portions of adjoining state lands would be pursued. Current uses of the land would continue.</i>

LOCAL SOCIAL AND ECONOMIC CONSIDERATIONS

With either designation or nondesignation of this WSA as wilderness, it is predicted that the area would still see an increase in recreation use. However, designation of the West Cold Spring WSA as wilderness would help to incrementally increase long-term recreation use in the Browns Park and Maybell areas. Greater public awareness and publicity of the area would also draw wilderness users from outside northwest Colorado. Recreation use of the area is projected to increase from 1,000 to 1,200 visitor days or more. This increase in recreation use would generate some long-term increase in local income and although not large, could be noticed in smaller communities in the area such as Browns Park and Maybell. These economic benefits to smaller communities could be more noticeable if all the areas proposed for wilderness in the northwest part of Colorado became wilderness.

Local economics would not be substantially affected by oil and gas exploration or development if the areas were not designated as wilderness. Oil and gas activity would, however, result in a small, short-term increase in local incomes. Social factors were not considered a significant issue in the study.

SUMMARY OF WSA SPECIFIC PUBLIC COMMENTS

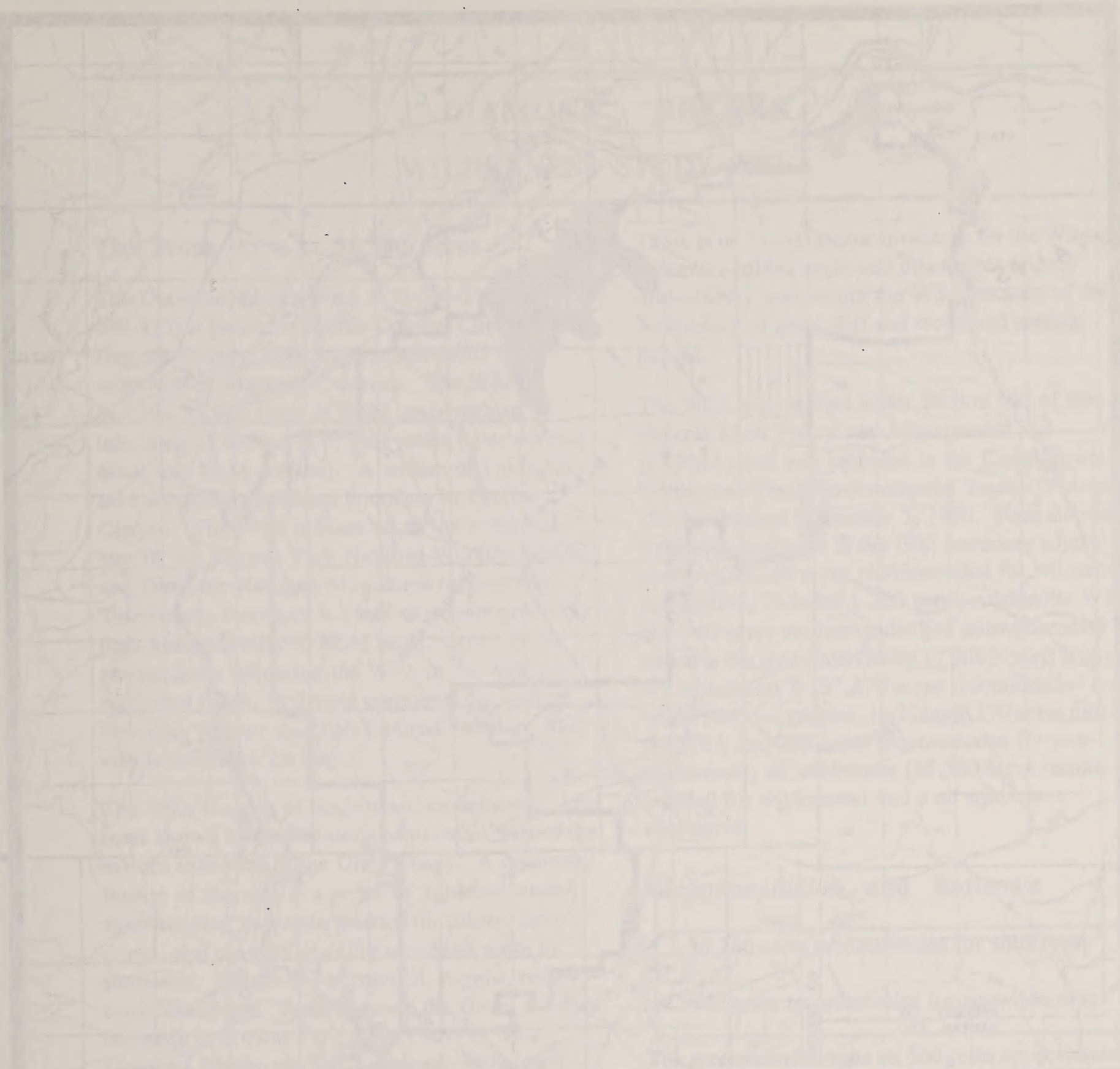
Public involvement has occurred throughout the wilderness review process. Certain comments reviewed during the inventory process and early stages of the Draft Environmental Impact Statement (DEIS) were used to develop significant study issues and various alternatives for the ultimate management of those lands with wilderness values.

During formal public review of the DEIS, a total of 118 comments (35 oral and 83 written) were received which specifically addressed this WSA. In general, 110 comments (93 percent) supported wilderness designation and 5 (4 percent) favored releasing the area for other uses (no wilderness). Three comments (3 percent) gave no recommendation.

Specific comments by those favoring wilderness designation generally focused on the outstanding wilderness values including significant and valuable fish and wildlife habitat and outstanding recreation opportunities. Some comments point out that wilderness designation would protect special features in the WSA as well as the visual resource, water, other natural resources, and ecological diversity within the region. Other comments state that the area should be much larger and be expanded to include BLM public lands with wilderness characteristics east of the Matt Trail to include Limestone Ridge, Big Joe Basin, and Little Joe Basin as well as the remainder of Beaver Creek Canyon. Generally, comments state that wilderness designation for West Cold Spring is more important than any mineral values or other uses of the area.

Those opposing wilderness designation generally state that there is enough or too much designated wilderness now and favor other uses (grazing, oil and gas exploration, etc.), for the WSA. The Moffat County Commissioners are opposed to wilderness designation of West Cold Spring WSA.

No other federal, state, or local agencies gave WSA specific recommendations, however, the State of Utah Natural Resources Department, Wildlife Resources commented that vegetation manipulation is needed to maintain forage for the bighorn sheep herd in the WSA.



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How can I find out more about the WSA? Call 1-800-368-3636 or visit our website at www.wsa.org

THE WSA is a national organization of people who are interested in the history of the United States. We are a non-profit organization that is dedicated to the preservation of the nation's history. We have a large collection of books, maps, and other historical documents. We also have a large collection of photographs and other historical artifacts. We are currently looking for people who are interested in the history of the United States to join our organization.

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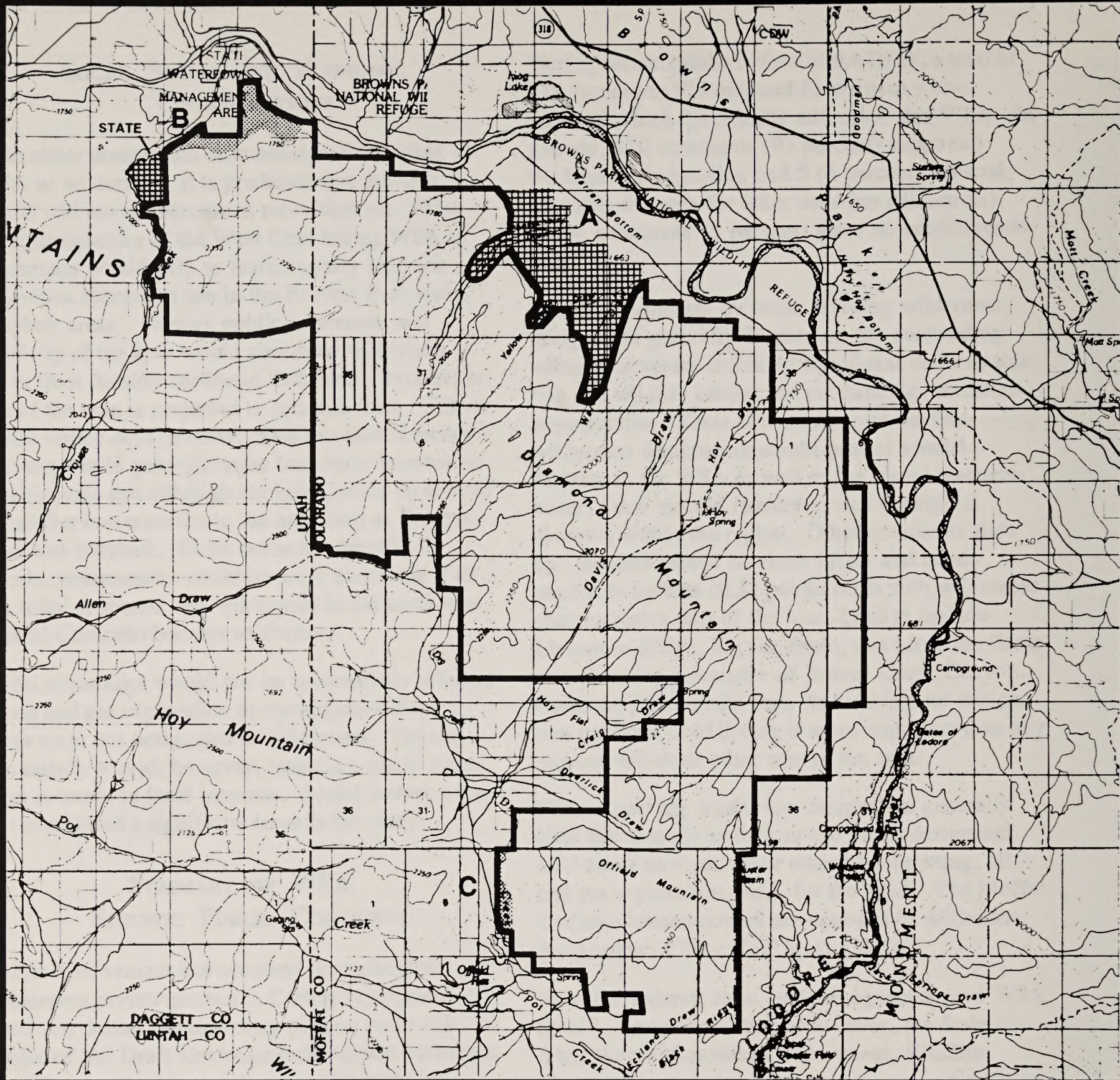
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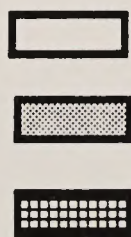
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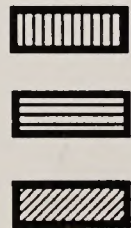


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RECOMMENDED FOR
WILDERNESS
RECOMMENDED FOR
NONWILDERNESS
LAND OUTSIDE WSA
RECOMMENDED FOR
WILDERNESS



SPLIT ESTATE
STATE
PRIVATE (NONE)

Miles 1 0 1 2 3

Diamond Breaks WSA
Proposal
CO-010-214 and UT-080-113



January 1991

DIAMOND BREAKS

WILDERNESS STUDY AREA

The Study Area -- 35,380 acres

The Diamond Breaks WSA (CO-010-214 and UT-080-113) is located in Moffat County, Colorado, and Daggett County, Utah, approximately 65 miles northwest of Maybell, Colorado. The WSA includes 35,380 acres of BLM lands with an inholding of 635 acres of split estate (state mineral estate and BLM surface). A section of Utah state land adjoins the northern boundary in Crouse Canyon. The WSA is bounded on the north and east by the Browns Park National Wildlife Refuge and Dinosaur National Monument respectively. The western boundary is a mix of private property lines and undeveloped BLM lands. Some of the private lands bordering the WSA in the west are cultivated fields. A 3-mile portion of the western boundary follows the Utah-Colorado border. The area is shown on the map.

The WSA consists of the broken, mountainous, land mass known as the Diamond Mountains, part of the eastern extension of the Uinta Range. A dominate feature of the area is a series of northeast-southwest trending mountain peaks with ridges, steep draws, and canyons draining north and south to southwest. This series of colorful, rugged, red sandstone ridges "break" toward the Green River to the north in Browns Park. (See Photo 1) The Diamond Breaks provide a dramatic and significant, scenic, mountainous background as viewed from Browns Park and along the Green River in the Browns Park National Wildlife Refuge.

The WSA contains a diverse mixture of vegetative communities, varying from sagebrush to pinyon-juniper woodlands to aspen, mountain brush, Douglas fir, limber pine, and ponderosa pine. Elevation spans 3,200 feet within the area.

The WSA supports a diversity of wildlife including elk, mule deer, black bear, mountain lion, coyote, and other mammals and reptiles. Much of the WSA is winter range for deer and elk and a portion in Utah is critical winter range for deer.

There is no formal raptor inventory for the WSA, however, golden eagle and other birds of prey undoubtedly nest within the WSA because of the availability of good cliff and woodland nesting habitat.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Craig District Wilderness Final Environmental Impact Statement (EIS) published November 5, 1990. Four alternatives were analyzed in the EIS; boundary adjustment A (36,240 acres recommended for wilderness designation, includes 1,200 acres outside the WSA and 340 acres recommended for nonwilderness) which is the recommendation of this report; boundary adjustment B (37,470 acres recommended for wilderness designation, includes 2,370 acres outside the WSA and 280 acres recommended for non-wilderness); all wilderness (35,380 acres recommended for wilderness) and a no wilderness alternative.

Recommendation and Rationale

36,240 acres recommended for wilderness

340 acres recommended for nonwilderness

The recommendation is to designate approximately 36,240 acres of BLM public land as wilderness and release 340 acres for uses other than wilderness (boundary adjustment A alternative). This includes 1,200 acres from outside the WSA boundary. (See Parcel A on the Map) The environmentally preferable alternative is the boundary adjustment B alternative which designates an area larger than the recommendation and would result in the least change in the natural environment over the long term.

The large, blocked configuration of the WSA enhances management of the area as wilderness. Approximately 1,200 acres adjacent to the Browns Park National Wildlife Refuge is added to the area to

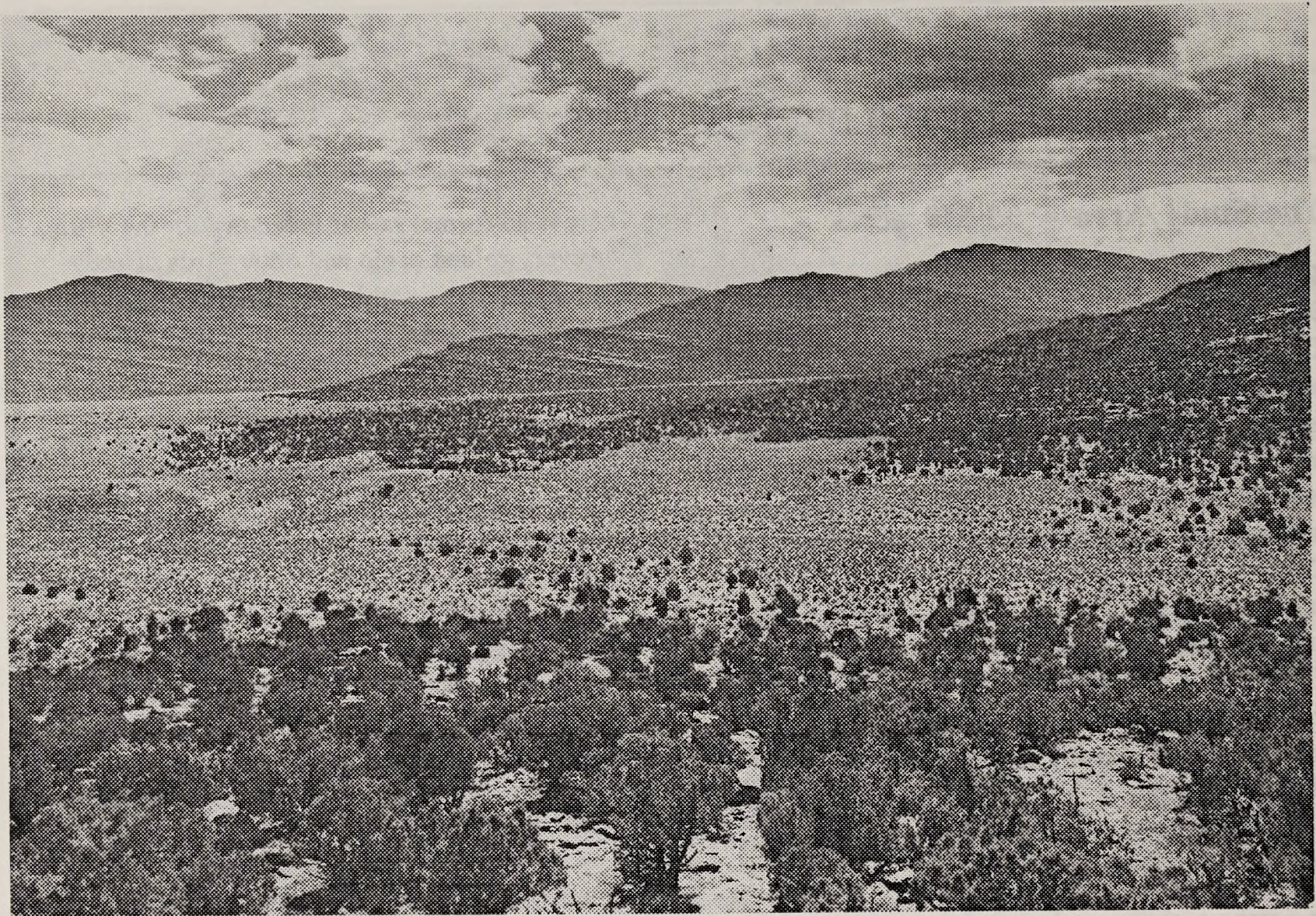


Photo 1. Diamond Breaks WSA. View of Diamond Breaks from the lower elevations of the WSA in Browns Park.

form a manageable boundary and greatly enhance opportunities for solitude and primitive and unconfined recreation. (See Parcel A on Map 1) The Refuge boundary is fenced and would aid in management and control of activities within the designated area.

The area also borders Dinosaur National Monument to the south and southeast which increases the ability to manage the area as wilderness while expanding and protecting opportunities for solitude and primitive and unconfined movement within the area. The addition of a portion of state lands in Utah and acquiring a section of state mineral estate in Colorado would further enhance wilderness management of Diamond Breaks. (See Map)

Approximately 280 acres on the northern boundary in Utah, Parcel B on the map, and 60 acres along the southwest boundary, Parcel C on the map, are excluded from the area. Parcel B is in conflict with a lease agreement with the Utah Division of Wildlife

and Parcel C realigns the boundary to follow a short segment of Dry Creek.

Diamond Breaks is recommended for wilderness designation because of the truly outstanding wilderness values, including solitude, primitive recreation, outstanding scenery, and lack of conflicts with other resources. The recommended area provides a scenic mountainous viewshed from Browns Park and the Green River (which is recommended for scenic designation under the Wild and Scenic Rivers Act). A portion of the recommended area in Utah is within the Green River scenic corridor Area of Critical Environmental Concern (which was designated to protect the scenic, historic, archaeological, recreational, and scientific values present along the river corridor).

The area is easily accessible for wilderness recreation opportunities throughout most of the year from the lower elevations in Browns Park. The WSA is within a 4 to 5 hour drive of the Salt Lake City/



Photo 2. Diamond Breaks WSA. View north from Offield Mountain.

Ogden, Utah metropolitan areas and approximately 6-1/2 hours from Denver, Colorado.

Designation of the Diamond Breaks area as wilderness would preserve an area of scenic, undeveloped, semi-arid mountainous landforms and ecosystems which are not well represented in the National Wilderness Preservation System. The diverse vegetative communities range from sagebrush and pinyon-juniper woodlands to aspen, mountain brush, Douglas fir, limber pine, and ponderosa pine forests. The deep red sandstone outcrops contrast with the deep green woodlands to provide a scenic background and interesting landscape.

The presence of Diamond Breaks in its natural state complements the natural and cultural features in Dinosaur National Monument to the south and east. Wilderness designation would protect these natural and cultural features as well as scenic vistas of the area.

No manageability problems or resource conflicts would result from wilderness designation. No new range improvements have been proposed and no conflicts with range management are expected. Portions of 6 livestock grazing allotments lie within the recommended area with a large central portion unallotted. An estimated 1,166 animal unit months (AUM) of livestock forage is available. Existing range improvements within the proposed area consist of 3 miles of fence, 3 stock ponds, and 2 developed springs with stock tanks and buried pipeline. Maintenance of these existing range improvements would continue.

Oil and gas and other mineral potential in the area is considered to be low according to the U.S. Geological Survey report for the WSA. There are no mining claims or leases within the proposed area.

Table 1 - Land Status and Acreage Summary of the Study Area

<u>Within Wilderness Study Area</u>	<u>Colorado Acreage</u>	<u>Utah Acreage</u>	<u>Total Acreage</u>
BLM (surface and subsurface)	30,845	3,900	34,745
Split Estate (BLM surface only)	635	0	635
Inholdings (state, private)	<u>0</u>	<u>0</u>	<u>0</u>
Total	31,480	3,900	35,380
<u>Within the Recommended Wilderness Boundary</u>			
BLM (within WSA)	30,785	3,620	34,405
BLM (outside WSA)	1,200	0	1,200
Split Estate (within WSA)	<u>635</u>	<u>0</u>	<u>635</u>
Total BLM Land Recommended for Wilderness	32,620	3,620	36,240
Inholdings (state, private) *	0	190	190
<u>Within the Area Not Recommended for Wilderness</u>			
BLM	60	280	340
Split Estate	<u>0</u>	<u>0</u>	<u>0</u>
Total BLM Land Not Recommended for Wilderness	60	280	340
Inholdings (state, private)	0	0	0

* Table 5 contains a description of inholdings included within the recommended boundary.

Criteria Considered in Developing the Wilderness Recommendations

WILDERNESS CHARACTERISTICS

Naturalness

The Diamond Breaks WSA is predominately natural with negligible human imprints. The study area consists of a broken mountainous land mass known as the Diamond Mountains, part of the eastern extension of the Uinta Range. A dominant feature of the area is a series of northwest-southeast

trending mountain peaks, with ridges draws and canyons trending north and south-southwest. This series of colorful pinyon-juniper covered red sandstone ridges "break" toward the Green River in Browns Park to the northeast.

Vegetation is diverse in this semi-arid area and varies from sagebrush and pinyon-juniper woodlands to mountain brush communities, aspen, Douglas fir, and Ponderosa pine forest with scattered limber pine at higher elevations. Elevations range from 5,400 feet near the Green River to 8,600 feet in the western portion of the WSA.



Photo 3. Diamond Breaks WSA. Aerial view west into Hoy Draw.

Minor human imprints are scattered and consist of 3 stock tanks, 3 stock ponds, 3 miles of fence, 150 feet of buried pipeline, and approximately 10.5 miles of ways. The wide distribution and screening by vegetation and topography make these imprints substantially unnoticeable within the recommended area as a whole.

The Diamond Breaks area supports diverse wildlife such as elk, mule deer, coyote, mountain lion, black bear, raptors, and other small birds, mammals, amphibians, and reptiles. Slightly less than one-half of the area is considered to be winter range for deer and elk and small portions are considered to be severe winter range.

No formal raptor nest inventory has been done, however, golden eagle and other raptors undoubtedly nest within the WSA with the availability of good habitat.

Solitude

The diverse and rugged topography, large size, blocked configuration, dense vegetation, and low use within this WSA, provide outstanding opportunities to experience solitude throughout the WSA. The proposed area provides room for visitors to disperse and become isolated. The ruggedness and natural character of the area prevent outside influences from affecting the visitors experience of solitude. The expansive views both within and outside of the area further enhance the feeling of solitude. The numerous canyons and steep draws offer excellent opportunities for a visitor to become truly isolated within this remote area of northwest Colorado.

Primitive and Unconfined Recreation

The Diamond Breaks WSA offers outstanding opportunities to experience primitive and unconfined recreation activities such as hiking, backpacking, horseback riding, camping, scenic viewing,

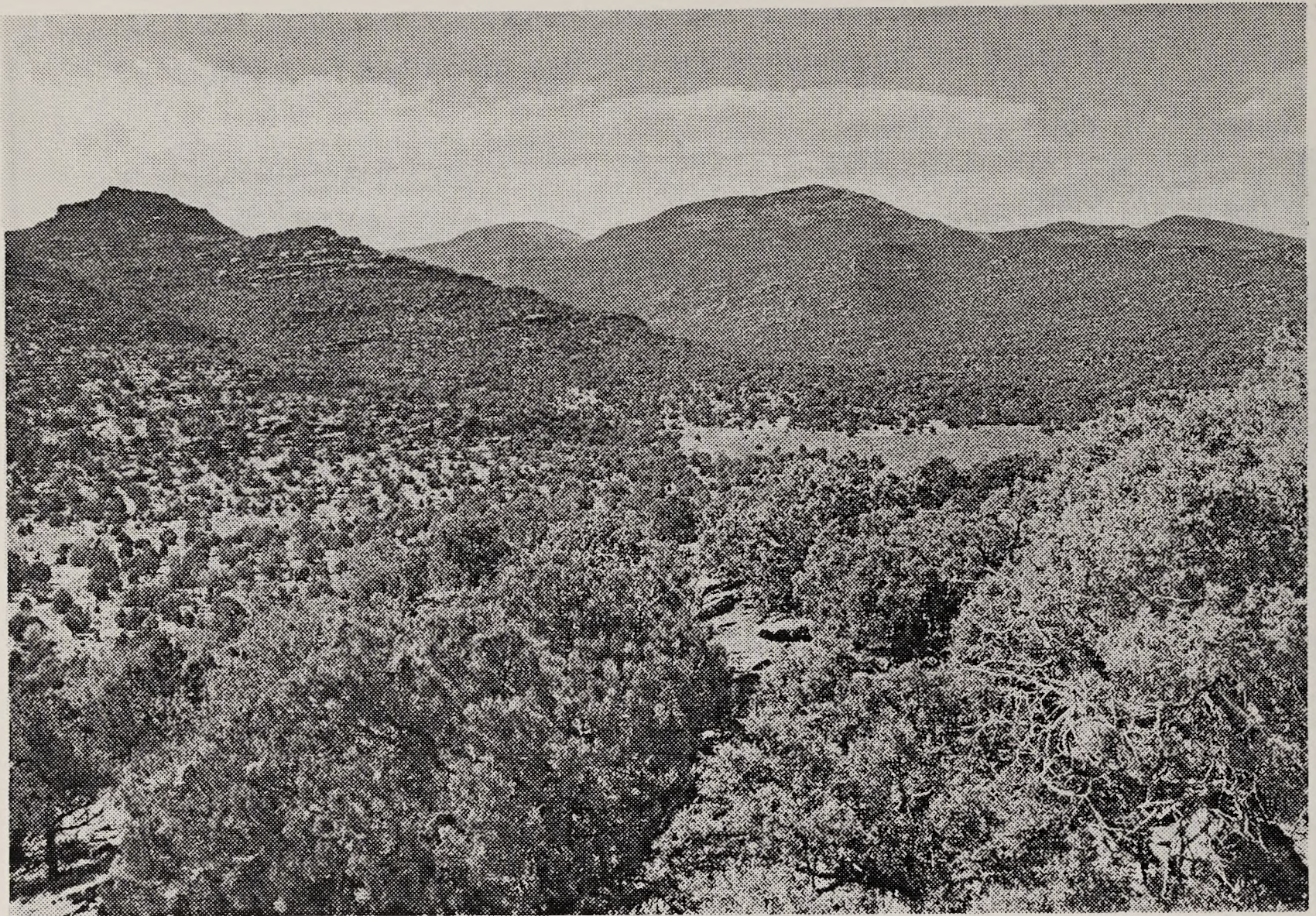


Photo 4. Diamond Breaks WSA. View of Diamond Breaks showing a portion of the lower elevation addition in Browns Park.

viewing wildlife, and viewing cultural sites. The numerous draws and ridges provide foot or horse-back travel into or through the area such as the Hoy Trail in Hoy Draw.

The recommended area in conjunction with Dinosaur National Monument further enhances opportunities for unconfined movement and spectacular views into the deep, red Canyon of Lodore where whitewater floatboating occurs. The WSA also borders the Browns Park National Wildlife Refuge which offers different recreation opportunities, settings, and experiences. These areas all complement each other and together offer diverse recreation opportunities, settings, and experiences.

Special Features

Although no formal cultural resource inventories have been conducted, it is known that significant

cultural resources such as rock art, granaries, rock shelters, and lithic scatter sites related to prehistoric and historic occupation can be found in the WSA. Approximately 1,750 acres of the WSA in Utah is part of the Green River scenic corridor, Area of Critical Environmental Concern (ACEC). The ACEC is designated to protect scenic, historic, archaeologic, recreational, and scientific values present along the river corridor. The WSA provides an important scenic, mountainous background from the Green River, Browns Park, Browns Park National Wildlife Refuge and the northern end of Dinosaur National Monument. The Green River, through the adjacent Browns Park National Wildlife Refuge, is pending Congressional action for designation as a scenic river under the Wild and Scenic Rivers Act. A small portion of the WSA in Utah is designated as critical habitat (winter range) for mule deer.

DIVERSITY IN THE NATIONAL WILDERNESS PRESERVATION SYSTEM

Assessing the diversity of natural systems and features as represented by ecosystems

Wilderness designation of the WSA would add a landform and semi-arid ecosystems which currently have little or no representation in the National Wilderness Preservation System (NWPS) in Colorado. Diamond Breaks lies in the Rocky Mountain Forest Province ecoregion with juniper-pinyon woodlands (17,000 acres), sagebrush steppe

(3,380 acres), and mountain mahogany-oak scrub (15,000 acres) ecosystems. The sagebrush steppe and mountain mahogany-oak scrub ecosystems are not represented in designated wilderness in Colorado. The juniper-pinyon woodland ecosystem is represented in only 1 area in Colorado and only 2 areas nationwide. Dinosaur National Monument (DNM), adjacent to the south, is representative of the juniper-pinyon woodland and sagebrush steppe ecosystems. Although, portions of DNM are administratively endorsed for wilderness designation, they are not part of the NWPS. (See Table 2)

Table 2 - Ecosystem Representation

<u>Bailey-Kuchler Classification</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
Province/Potential Natural Vegetation	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
<i>Nationwide</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	2	41,451	21	163,574
Sagebrush Steppe	4	76,129	22	241,526
Mountain Mahogany-Oak Scrub	7	80,852	7	35,840
<i>Colorado</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	1	11,181	15	115,134
Sagebrush Steppe	0	0	9	31,960
Mountain Mahogany-Oak Scrub	0	0	5	30,495

Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers

The Diamond Breaks WSA is within a day's drive of 2 major population centers in Utah. The area is

within a 6-1/2 hour drive of Denver, Colorado. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a 5 hour drive of the population centers.

Table 3 - Wilderness Opportunities for Residents of Major Population Centers

<u>Population Center</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
Salt Lake City/Ogden	11	685,088	42	1,826,904
Provo /Orem	12	730,088	52	2,307,031

Balancing the geographic distribution of wilderness areas

The Diamond Breaks WSA would contribute to balancing the geographic distribution of areas within the National Wilderness Preservation System. The nearest wilderness is the High Uintas (460,000 acres) some 50 miles to the west in Utah. However, the landforms and ecosystems are entirely different than those found in the WSA. In addition, Diamond Breaks has year-round access from Browns Park. Portions of Dinosaur National Monument to the south have been administratively endorsed for wilderness designation and these 2 areas complement each other. The Monument protects the core area of the Lodore and Yampa River Canyons while Diamond Breaks is a mountainous, upland, landform with both similar and different ecosystems. The West Cold Spring WSA is located some 4 miles to the north on the opposite side of Browns Park. The Diamond Breaks WSA, West Cold Spring WSA, and Dinosaur National Monument complement each other with different ecosystems, landforms, and opportunities to attain diverse wilderness experiences. There are an additional 8 BLM study areas within a 1 to 3 hour drive of Diamond Breaks. Since this WSA is accessible year round, contains different ecosystems and landforms, and provides different recreation opportunities than other nearby areas, the opportunities to attain diverse wilderness experiences are expanded.

MANAGEABILITY

The Diamond Breaks WSA can be effectively managed to preserve its wilderness character. The boundaries have been adjusted to include enough area to enhance and insure manageability. Adding approximately 1,200 acres adjacent to the Browns Park National Wildlife Refuge will insure control of off-highway vehicle and other noncompatible uses

and provide an easily identified, fenced boundary. A portion of the area recommended as nonsuitable in Utah will allow a continuing lease agreement with the Utah Wildlife Division to remain active and provide wildlife habitat diversity.

The state school trust lands in Utah identified for acquisition (approximately 190 acres) would further enhance the manageability of the area (See Map) as would acquisition of 635 acres of state mineral rights in Colorado.

Existing range improvements consisting of 3 miles of fence, 3 stock ponds, and 2 developed springs with watering tanks, and buried pipeline would continue to receive maintenance with the use of motorized vehicles, only if necessary. No new range improvements are proposed.

There are no oil and gas leases or mining claims within the area. With the exception of 635 acres of split estate and Utah state lands, all other subsurface minerals within the area are under federal ownership.

ENERGY AND MINERAL RESOURCE VALUES

The Diamond Breaks WSA energy and mineral values were evaluated in *Mineral Resources of the Diamond Breaks Wilderness Study Area, Moffat County, Colorado, and Daggett County, Utah, U.S. Geological Survey Bulletin 1714-B* (1988).

The study area has inferred subeconomic resources of sand, gravel, and common variety rock. The potential for undiscovered resources of gold, uranium, copper, lead, zinc, or other metals, tuff (pumicite), and oil and gas is rated low. There is no resource potential for coal, manganese, phosphate, clay and shale, limestone, and gypsum. The resource potential for barite and commercial, grade

silica is unknown. This conclusion is based on field studies conducted in 1986 and 1987.

Assessments by BLM have determined that the Diamond Breaks WSA contains no real mineral value and there is little likelihood that any exploration or mineral development would occur in the foreseeable future.

IMPACTS ON RESOURCES

The following comparative impact table (Table 4) summarizes the effects on pertinent resources for the 4 alternatives for this WSA.

Table 4 - Comparative Summary of the Impacts by Alternative

Impact Topics	Recommendation: Boundary Adjustment A Alternative (36,240 acres)	Boundary Adjustment B Alternative (37,470 acres)	All Wilderness Alternative	No Wilderness Alternative
Impacts on Wilderness Characteristics	<i>Opportunities for solitude, primitive and unconfined recreation, high scenic quality, and the naturalness of the area would be protected and increased on 36,240 acres.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, high scenic quality, and the naturalness of the area would be protected and increased on 37,470 acres.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, high scenic quality, and the naturalness of the area would be protected on 35,380 acres.</i>	<i>The quality of naturalness along the east and west boundaries would be diminished slightly as a result of livestock grazing and construction of 1 new stock pond.</i>
Impacts on Ranching Operations	<i>Livestock forage production within the proposed wilderness area would remain at current levels of 1,347 AUMs and at 1,166 AUMs within the original WSA. Operating costs on grazing allotments within the wilderness area would be slightly higher where livestock operations could be accomplished reasonably without the use of motorized vehicles.</i>	<i>Livestock forage production within the proposed wilderness area would remain at current levels of 1,385 AUMs and at 1,166 AUMs within the original WSA. Operating costs on grazing allotments within the wilderness area would be slightly higher where livestock operations could be accomplished reasonably without the use of motorized vehicles.</i>	<i>Livestock forage production within the WSA would remain at current levels of 1,166 AUMs. Operating costs on grazing allotments within the WSA would be slightly higher where livestock operations could be accomplished reasonably without the use of motorized vehicles.</i>	<i>Livestock forage production would remain at 1,166 AUMs. Operating costs associated with range improvement projects would remain at current levels because motor vehicle use would be allowed.</i>
Impacts on Recreation Use and Quality	<i>Recreation use levels in the proposed wilderness area are expected to increase from 800 visitor days to 1,000 visitor days per year. Opportunities for primitive recreation would remain unchanged, while unconfined movement would be enhanced in a larger area with a natural setting.</i>	<i>Recreation use levels in the proposed wilderness area are expected to increase from 800 visitor days to 1,000 visitor days per year. Opportunities for primitive recreation would remain unchanged, while unconfined movement would be enhanced in a larger area with a natural setting.</i>	<i>Recreation use levels in the proposed wilderness area are expected to increase from 800 visitor days to 1,000 visitor days per year. Opportunities for primitive and unconfined recreation would remain unchanged in a natural setting.</i>	<i>Visitor use levels would increase from 800 to 1,000 visitor days per year. The Colorado portion of the WSA would be managed to provide a predominately natural setting. Opportunities for primitive and unconfined recreation would remain unchanged in all of the WSA.</i>

Table 4 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: Boundary Adjustment A Alternative (36,240 acres)	Boundary Adjustment B Alternative (37,470 acres)	All Wilderness Alternative	No Wilderness Alternative
<i>Impacts on Big Game Species (Populations and Habitat) and Eagles</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 560 deer and 35 elk would remain unchanged.</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 560 deer and 35 elk would remain unchanged.</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 560 deer and 35 elk would remain unchanged.</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 560 deer and 35 elk would remain unchanged.</i>
<i>Impacts on Mineral Exploration and Production</i>	<i>The area would be closed to mineral entry and the low potential for oil and gas exploration or development would be precluded. No subsurface geologic data would be gathered.</i>	<i>The area would be closed to mineral entry and the low potential for oil and gas exploration or development would be precluded. No subsurface geologic data would be gathered.</i>	<i>The area would be closed to mineral entry and the low potential for oil and gas exploration and development would be precluded. No subsurface geologic data would be gathered.</i>	<i>The area would be open to mineral entry. No interest in oil and gas exploration is anticipated. Only limited interest in other minerals would be expected.</i>
<i>Impacts on Private Lands</i>	<i>Acquisition of a portion of adjoining state land and 635 acres of state mineral estate would be pursued. Current use of the land would continue.</i>	<i>Acquisition of a portion of adjoining state land and 635 acres of state mineral estate would be pursued. Current uses of the land would continue.</i>	<i>Acquisition of a portion of adjoining land and 635 acres of state mineral estate would be pursued. Current uses of the land would continue.</i>	<i>Acquisition of 635 acres of state mineral estate would be pursued. Current uses of the land would continue.</i>
<i>Impacts on Water Quality</i>	<i>Because no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>	<i>Because no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>	<i>Because no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>	<i>Because no surface-disturbing activities are expected to occur, there would be no change or impact to water quality.</i>

LOCAL SOCIAL AND ECONOMIC CONSIDERATIONS

Designation of the Diamond Breaks WSA as wilderness would incrementally help to increase recreation use in the Browns Park area. Greater public awareness and publicity of the area would also draw wilderness users from outside northwest Colorado. Recreation use of the area is projected to increase from 800 to 1,000 visitor days per year or more. This increase in recreation use would generate some long-term increase in local income and, although not large, could be noticed in smaller communities in the area such as Browns Park and

Maybell. These economic benefits to smaller communities could be even more noticeable if all the areas proposed for wilderness in the northwest part of Colorado became wilderness. Social factors were not considered a significant issue in the study.

SUMMARY OF WSA SPECIFIC PUBLIC COMMENTS

Public involvement has occurred throughout the wilderness review process. Certain comments reviewed during the inventory process and early stages of the Draft EIS were used to develop significant study issues and various alternatives for the

ultimate management of those lands with wilderness values.

During formal public review of the Draft Environmental Impact Statement, a total of 144 comments (42 oral and 102 written) were received which specifically addressed this WSA. In general, 138 comments (96 percent) supported wilderness designation and 3 (2 percent) favored releasing the area for other uses (no wilderness). Three comments (2 percent) gave no specific recommendation.

Those favoring wilderness designation generally commented on the outstanding wilderness and scenic values of the WSA as well as the biological diversity exhibited in the WSA. Several comments

support expanding the area in Utah in addition to the recommendation which would add areas with wilderness characteristics.

Those opposing wilderness designation generally feel that there is enough or too much designated wilderness now and favor other uses for the WSA.

The National Park Service and Colorado Department of Natural Resources support wilderness designation for Diamond Breaks. The State of Utah Division of Wildlife Resources requested a minor boundary change to eliminate a small area used to develop winter range for wildlife. This is consistent with the boundaries in the recommendation. No other federal, state, or local agencies gave specific recommendations for this WSA.

Table 5
Estimated Cost of Acquisition of Non Federal Holdings
Within Areas Recommended for Designation 1/

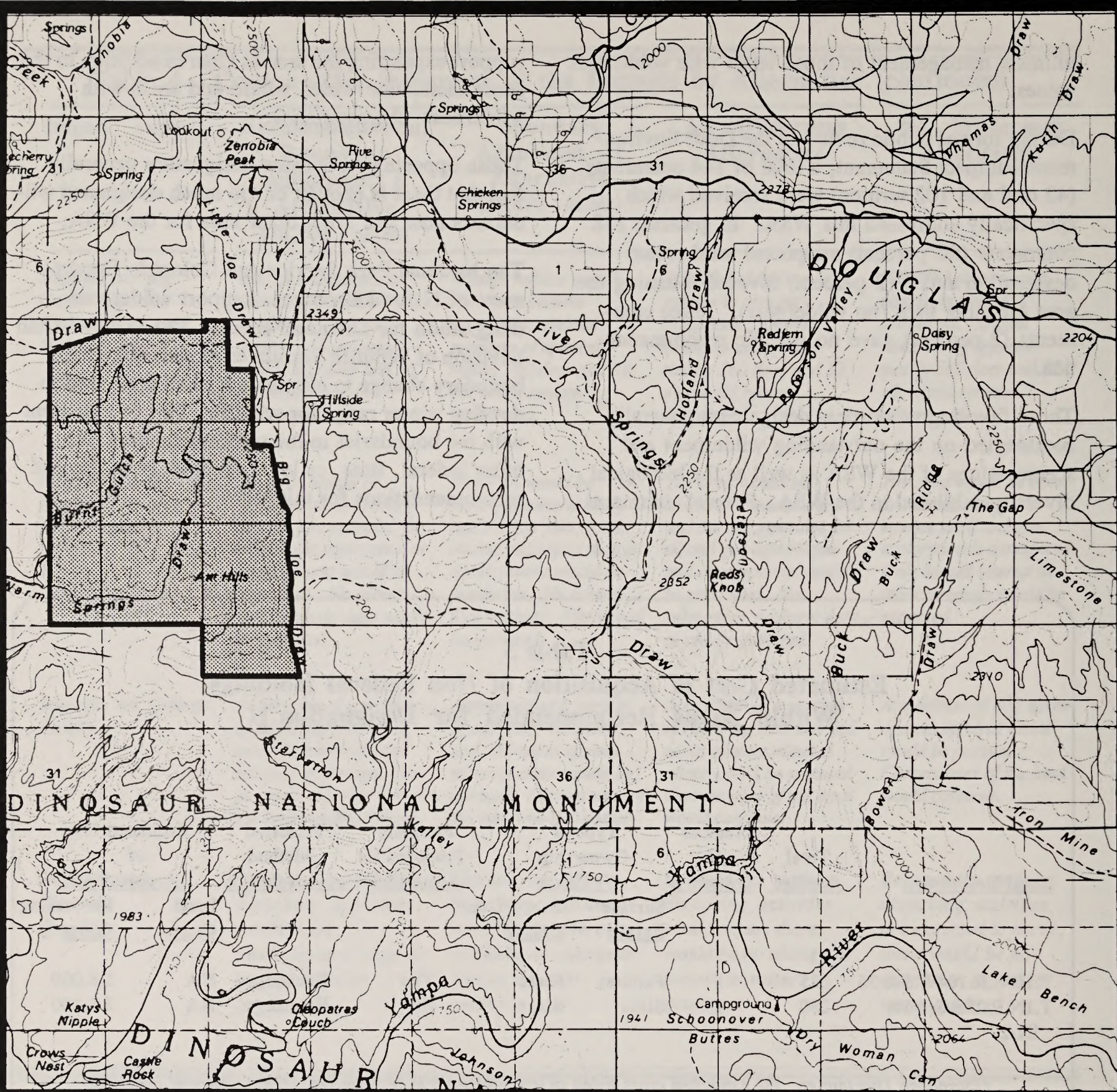
<u>Legal Description</u>	<u>Total Acreage</u>	<u>Number of Owners <u>2/</u></u>	<u>Type of Ownership</u>		<u>Presently Proposed for Acquisition</u>	<u>Preferred Method of Acquisition</u>	<u>Estimated Cost of Acquisition <u>3/</u></u>	
			<u>Surface Estate</u>	<u>Subsurface Estate</u>			<u>Land Costs</u>	<u>Processing Costs</u>
T.10N.,R.104W.Sec 36	635	1	Federal	State	Yes	Exchange	NA	\$ 8,000
T.1N,R.25E.Sec 16, E1/2	280	1	State	State	No	Exchange	NA	\$ 8,000

1/Standard Disclaimer: the estimated costs listed in this appendix in no way represents a formal appraisal value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estate with similar characteristics to those within the WSA. The estimates are for the purpose of establishing a range of potential costs to the government of acquiring non-federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in the appendix.

Processing costs are all miscellaneous expenses other than land costs including work month costs, appraisals, title work, escrow tests, etc.

2/If a larger parcel as shown in the first column has been recently subdivided or is jointly owned, this column represents the number of owners that could be involved in any acquisition negotiation.

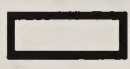
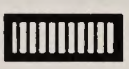

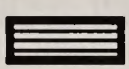


3/Where exchange is the proposed acquisition method, only administrative costs of processing the exchange are shown. Land costs would not be applicable. Where direct purchase is proposed, an estimate of both the land costs and the processing costs are provided.

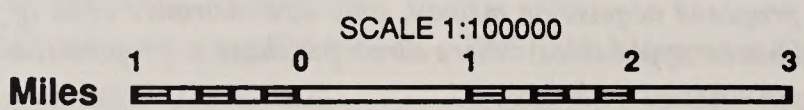


T 8 N
T 7 N
T 7 N
T 6 N

R 102 W

R 102 W | R 101 W

- | | | | |
|---|---|---|-------------------------------|
|  | RECOMMENDED FOR WILDERNESS (NONE) |  | SPLIT ESTATE (NONE) |
|  | RECOMMENDED FOR NONWILDERNESS |  | STATE (NONE) |
|  | LAND OUTSIDE WSA RECOMMENDED FOR WILDERNESS (NONE). |  | PRIVATE (NONE WITHIN THE WSA) |



Ant Hills WSA
Proposal
CO-010-224



January 1991

ANT HILLS

WILDERNESS STUDY AREA

The Study Area -- 4,354 acres

The Ant Hills WSA (CO-010-224) is located in Moffat County approximately 50 miles west of Maybell, Colorado. The WSA includes 4,354 acres of BLM lands and is bordered on the west and south by Dinosaur National Monument. The adjacent area of the Monument is administratively endorsed for wilderness designation. The WSA is bounded on the north by a road and on the east by undeveloped private lands, a primitive jeep trail on undeveloped BLM lands in Big Joe Draw and the Chew Winter Camp WSA in the southeast corner. The WSA is shown on the map.

This remote WSA consists of hills and valleys on the southern slopes of Douglas Mountain which trend southward into Dinosaur National Monument and the Yampa River. The Ant Hills consist of several hills rising 400 to 500 feet above the draws in the southeastern part of the WSA. (See Photo 1) The area is an extension of the landforms and upper end of drainages found in Dinosaur National Monument. The WSA is dependent upon the Monument for outstanding wilderness values. Vegetation consists mainly of pinyon-juniper woodlands, sagebrush, and native grass communities.

The WSA was studied under Section 202 of the Federal Land Policy and Management Act (FLPMA) and was included in the Craig District Wilderness Final Environmental Impact Statement (EIS) published November 5, 1990. Four alternatives were analyzed in the EIS; all wilderness (4,354 acres recommended for wilderness designation), boundary adjustment alternative (4,320 acres recommended for wilderness designation and 34 acres recommended for nonwilderness), combined Ant Hills, Chew Winter Camp, and Peterson Draw Alternative (10,220 acres recommended for wilderness designation and 614 acres recommended for nonwilderness) and no wilderness which is the recommendation of this report.

Recommendation and Rationale

0 acres recommended for wilderness

4,354 acres recommended for nonwilderness

The recommendation is to not designate the Ant Hills WSA as wilderness. The combined Ant Hills, Chew Winter Camp, and Peterson Draw alternative is the environmentally preferable alternative since its implementation would result in a larger area with the least change to the natural environment over the long term. There are no conflicts with any other resources or uses within the area.

During the study phase of the wilderness review process, BLM decided that the wilderness values contained in this area were not of an overall significance to warrant inclusion in the National Wilderness Preservation System. However, since public comment supported designation of the area along with Chew Winter Camp and Peterson Draw, and because in conjunction with lands in Dinosaur National Monument the area does contain outstanding wilderness characteristics, BLM decided to carry this Section 202 WSA through the reporting process and allow Congress the opportunity to decide whether or not to designate the Ant Hills WSA as wilderness.

If the WSA is released from wilderness consideration, the area will be managed for multiple uses with no specific or special stipulations to protect any wilderness or other natural values not already protected by regulation or law. Over the long term, wilderness values such as naturalness, solitude, and primitive and unconfined recreation opportunities would be irretrievably lost over much of the WSA. The area would be open to oil and gas leasing and mineral entry, livestock grazing and range improvements, open to off-highway vehicle use, harvest of woodland products and other uses.

Table 1 - Land Status and Acreage Summary of the Study Area

<u>Within Wilderness Study Area</u>	<u>Acres</u>
BLM (surface and subsurface)	4,354
Split Estate (BLM surface only)	0
Inholdings (state, private)	<u>0</u>
Total	4,354
<u>Within the Recommended Wilderness Boundary</u>	
BLM (within WSA)	0
BLM (outside WSA)	0
Split Estate (within WSA)	<u>0</u>
Total BLM Land Recommended for Wilderness	0
Inholdings (state, private)	0
<u>Within the Area Not Recommended for Wilderness</u>	
BLM	4,354
Split Estate	<u>0</u>
Total BLM Land Not Recommended for Wilderness	4,354
Inholdings (state, private)	0

Criteria Considered in Developing the Wilderness Recommendations

WILDERNESS CHARACTERISTICS

Naturalness

The Ant Hills WSA is predominately natural in character with negligible human imprints. The area consists of hills, valleys, and draws on the southern slopes of Douglas Mountain which trend southward into Dinosaur National Monument and the Yampa River. The WSA is an extension of the landforms and ecosystems of Dinosaur National Monument to the west and south. Elevations in the

WSA vary from 6,800 feet in the south to 7,900 feet in the north. The Ant Hills consist of several hills rising 400 to 500 feet above the draws in the southeastern part of the WSA.

Vegetation consists mainly of pinyon-juniper woodlands, sagebrush, and native grass communities. The WSA provides habitat for mule deer and elk. Raptors and other birds, mammals, and reptiles inhabit the WSA.

Only a few minor human imprints are found in the WSA. These consist of 3 stock ponds, 4 check-dams, 1 developed spring, 0.5 miles of fence, and 1.5 miles of ways. All these imprints are scattered or

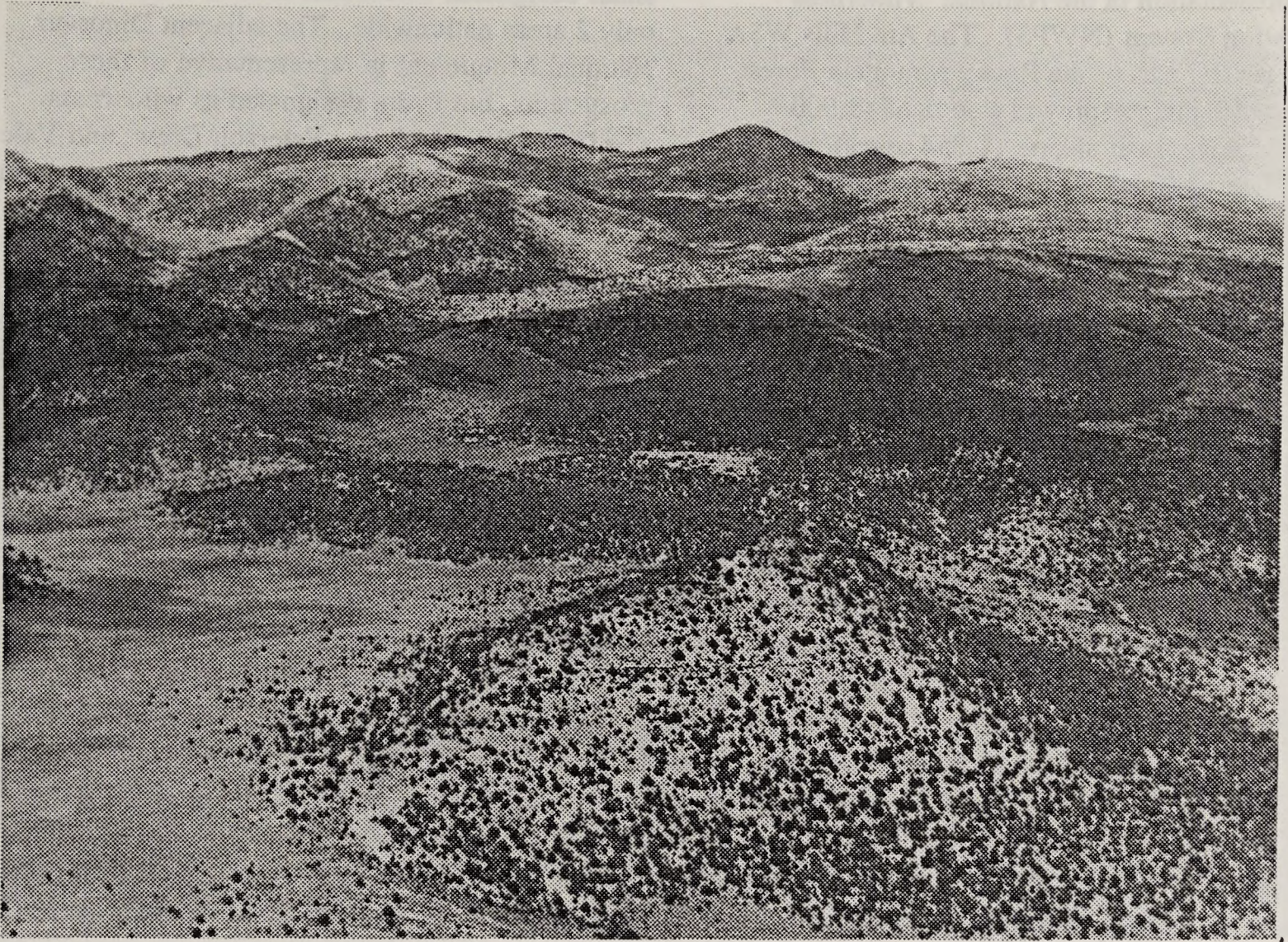


Photo 1. Ant Hills WSA. Aerial view northwest over Ant Hills (foreground); Zenobia Peak on horizon.

screened by vegetation or topography and are substantially unnoticeable within the area.

Solitude

Opportunities to experience solitude within the WSA are considered to be outstanding. The rugged topography, dense vegetation, low recreation use, remoteness of the WSA as well as consideration of the adjacent Dinosaur National Monument and Chew Winter Camp WSA contribute to the outstanding opportunities to become isolated and truly alone within the area. Expansive views into surrounding areas and Dinosaur National Monument also enhances the feeling of solitude.

Primitive and Unconfined Recreation

While opportunities for primitive and unconfined recreation do exist within the WSA, they are limited in extent and are not considered to be outstanding. However, when considered in conjunction with the

adjacent Dinosaur National Monument and Chew Winter Camp WSA, the opportunities become outstanding. Activities now occurring include hunting, hiking, horseback riding, and camping.

Special Features

The WSA borders Dinosaur National Monument and provides a background viewshed for monument visitors. These 2 areas complement each other. Scattered cultural sites are thought to be present within the WSA but no inventories have been done to verify their existence. There are no other known special features within the WSA.

DIVERSITY IN THE NATIONAL WILDERNESS PRESERVATION SYSTEM

Assessing the diversity of natural systems and features as represented by ecosystems

Wilderness designation of this semi-arid WSA would add a landform and ecosystems which currently have

little representation in the National Wilderness Preservation System (NWPS). The Ant Hills WSA is in the central part of the Rocky Mountain Forest Province with juniper-pinyon woodland (3,000 acres) and sagebrush steppe (1,354 acres) ecosystems. The sagebrush steppe ecosystem is not represented in the NWPS in Colorado. The juniper-pinyon woodland ecosystem is represented by only 1

small designated wilderness area in Colorado and only 2 areas nationwide. The adjacent Dinosaur National Monument is representative of these ecosystems, but is not designated as wilderness. The Chew Winter Camp, Peterson Draw, and Vale of Tears WSAs are to the east and none are recommended for wilderness designation. (See Table 2)

Table 2 - Ecosystem Representation

<u>Bailey-Kuchler Classification</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
<u>Province/Potential Natural Vegetation</u>	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
<i>Nationwide</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	2	41,451	22	167,864
Sagebrush Steppe	4	76,129	22	241,526
<i>Colorado</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	1	11,181	16	119,424
Sagebrush Steppe	0	0	9	31,960

Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers

The Ant Hills WSA is not within a 5-hour drive of any major population centers. However, the area is within a 6-hour drive of Salt Lake City, Utah and Denver, Colorado.

Balancing the Geographic Distribution of Wilderness Areas

The Ant Hills WSA would contribute to balancing the geographic distribution of areas within the National Wilderness Preservation System. The nearest designated wilderness is the High Uintas (460,000 acres) some 100 miles to the west in Utah. However, the landforms and ecosystems of this wilderness area are entirely different than those found

in the Ant Hills WSA. The WSA is generally accessible earlier and later in the year than the high alpine wilderness areas. Part of Dinosaur National Monument has been administratively endorsed for wilderness designation.

MANAGEABILITY

The Ant Hills WSA could be effectively managed to preserve its wilderness character. Management is enhanced because the area borders Dinosaur National Monument on 2 sides. Management of the adjacent Monument lands is consistent with wilderness management.

There are no conflicts with any other resources or uses within the WSA. A portion of 1 livestock grazing allotment lies within the WSA with an estimated 322 animal unit months (AUMs) of forage



Photo 2. Ant Hills WSA. View of the Ant Hills.

available. Existing range improvements consisting of 4 checkdams, 3 stock ponds, 1 developed spring, and 0.5 miles of fence would continue to receive maintenance.

ENERGY AND MINERAL RESOURCE VALUES

The subsurface geology of the Ant Hills WSA consists of Precambrian metasediments and Paleozoic sediments older than the Weber Sandstone (Hansen, 1980, Hansen et al, 1983), the oldest major reservoir rock in northwest Colorado. The primary reservoir rocks of the region have been eroded off this monoclinal south-dipping area.

Oil and gas interest is minimal with no drillholes in the adjacent several miles (Colorado State oil and gas plats), and little hope for hydrocarbon traps or source rocks. There are no oil and gas leases within this WSA. Spencer (1982) has listed this WSA as having zero petroleum potential. No oil and gas

exploration or development is likely in the foreseeable future.

Other mineral resources in this WSA are of negligible value and interest. No mining claims currently exist (BLM mine claim records effective 1-12-89) although copper claims have existed in the past. Uranium mineralization found elsewhere in the Browns Park Formation has not been detected within the WSA. Any mineral materials found in the WSA are of local value only, due to the distance and cost of transporting this commonly found material. Hence, no other mineral interest is likely in the foreseeable future.

IMPACTS ON RESOURCES

The following comparative impact table (Table 3) summarizes the effects on pertinent resources for the 4 alternatives for this WSA.

Table 3 - Comparative Summary of the Impacts by Alternative

Impact Topics	Recommendation: No Wilderness Alternative	Boundary Adjustment Alternative	All Wilderness Alternative	Combined Ant Hills, Chew Winter Camp, Peterson Draw Alternative
<i>Impacts on Wilderness Characteristics</i>	<i>Wilderness values of naturalness and solitude could be expected to deteriorate over time in the northern one-half of the WSA as a result of surface-disturbing activities related to range improvements and off-road vehicle use.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, and the naturalness of the area would be protected on 4,320 acres.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, and the naturalness of the area would be protected on 4,354 acres.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, and the naturalness of the area would be expanded and legislatively protected on 10,220 acres and lost on 614 acres.</i>
<i>Impacts on Ranching Operations</i>	<i>Livestock forage production would remain at 322 AUMs. Operating costs associated with range improvement projects would remain at current levels because motor vehicle use would be allowed.</i>	<i>Livestock forage production within the proposed area would remain at current levels of 318 AUMs and 322 AUMs within the original WSA. Operating costs on grazing allotments within the proposed area would be slightly higher where livestock operations could be accomplished reasonably without the use of motorized vehicles.</i>	<i>Livestock forage production within the WSA would remain at current levels of 322 AUMs. Operating costs on grazing allotments within the WSA could be slightly higher where livestock operations could be accomplished reasonably without the use of motorized vehicles.</i>	<i>Livestock forage production would remain at current levels of 842 AUMs in the proposed area and 916 AUMs in the original WSAs. Where livestock operations could be accomplished reasonably without the use of motorized vehicles, operating costs would be slightly higher than in portions outside the proposed wilderness.</i>
<i>Impacts on Recreation Use and Quality</i>	<i>Recreational use would remain at current levels of 300 visitor days per year. A slightly deterioration of the natural setting could be expected through range improvements and off-road vehicle use.</i>	<i>Primitive recreation opportunities would remain unchanged. Visitor use levels would increase slightly from 300 to 400 visitor days per year. Recreational off-road vehicle use (currently less than 10 visitor days per year) would be prohibited.</i>	<i>Primitive recreation opportunities would remain unchanged. Visitor use levels would remain unchanged. Visitor use levels would increase slightly from 300 to 400 visitor days per year. Recreational off-road vehicle use (currently less than 10 visitor days per year) would be prohibited.</i>	<i>Primitive recreation opportunities would increase slightly. Visitor use would increase from 900 to 1,150 visitor days per year. Recreational off-road vehicle use (currently 70 visitor days per year) would shift to nonmotorized use or occur outside the area.</i>

Table 3 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: No Wilderness Alternative	Boundary Adjustment Alternative	All Wilderness Alternative	Combined Ant Hills, Chew Winter Camp, Peterson Draw Alternative
<i>Impacts on Water Quality</i>	<i>Because no surface-disturbing activities are expected to occur, there would be no change or impact to Yampa River water quality, although the individual spring water quality should improve.</i>	<i>Because no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>	<i>Because no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>	<i>Because no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>
<i>Impacts on Big Game Species (Populations and Habitat) and Eagles</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 65 deer and 4 elk would remain unchanged. There would be no impact to golden eagles or other raptors.</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 65 deer and 4 elk would remain unchanged. There would be no impact to golden eagles or other raptors.</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 65 deer and 4 elk would remain unchanged. There would be no impact to golden eagles or other raptors.</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 162 deer and 9 elk would remain unchanged. There would be no impact to golden eagles or other raptors.</i>
<i>Impacts on Mineral Exploration and Production</i>	<i>The area would be open to all mineral entry. No interest or activity is expected for any minerals.</i>	<i>The area would be closed to all mineral entry. No negative impacts are expected except for the inability to collect subsurface geologic data.</i>	<i>The area would be closed to all mineral entry. No negative impacts are expected except for the inability to collect subsurface geologic data.</i>	<i>The area would be closed to all mineral entry. A negative effect due to the inability to collect subsurface geologic data would occur. A negative effect to other minerals would result from the inability to explore for copper minerals.</i>
<i>Impacts on Private Lands</i>	<i>No change in ownership or use of nonfederal land is anticipated.</i>	<i>No change in ownership or use of nonfederal land is anticipated.</i>	<i>No change in ownership or use of nonfederal land is anticipated.</i>	<i>No change in ownership or use of nonfederal land is anticipated.</i>

LOCAL SOCIAL AND ECONOMIC CONSIDERATIONS

Designation or nondesignation of this WSA as wilderness would have negligible impacts on local economic conditions. Social factors were not considered a significant issue in the study.

SUMMARY OF WSA SPECIFIC PUBLIC COMMENTS

Public involvement has occurred throughout the wilderness review process. Certain comments reviewed during the inventory process and early stages of the Draft Environmental Impact Statement (DEIS) were used to develop significant study issues and various alternatives for the ultimate management of those lands with wilderness values.

During formal public review of the DEIS, a total of 121 comments (35 oral and 86 written) were received which specifically addressed this WSA. In general, 115 comments (95 percent) supported wilderness designation and 4 (3 percent) favored releasing the area for other uses (no wilderness). Two comments (2 percent) gave no recommendation.

Specific comments by those favoring wilderness designation generally focused on the outstanding wilderness values of the area especially in conjunction with Dinosaur National Monument and when combined with the Chew Winter Camp and Peterson Draw WSAs. Many comments state that this should be one wilderness area (i.e., Ant Hills, Chew Winter Camp, and Peterson Draw) because there are no imprints of people which physically separate these WSAs. These areas complement Dinosaur National Monument and the Monument complements these areas. However, the combined area could stand on it's own as wilderness. Many noted the importance of this viewshed area to the Monument. Others stated that wilderness is more important than any other resource value in the WSA.

Those opposing wilderness generally feel that there is enough or too much designated wilderness now and favor other uses for the WSA.

The National Park Service supports wilderness designation and noted that the WSA should be managed in a manner compatible with Dinosaur National Monument and management of the WSA is more appropriate by BLM. No other federal, state, or local agencies gave WSA specific comments.

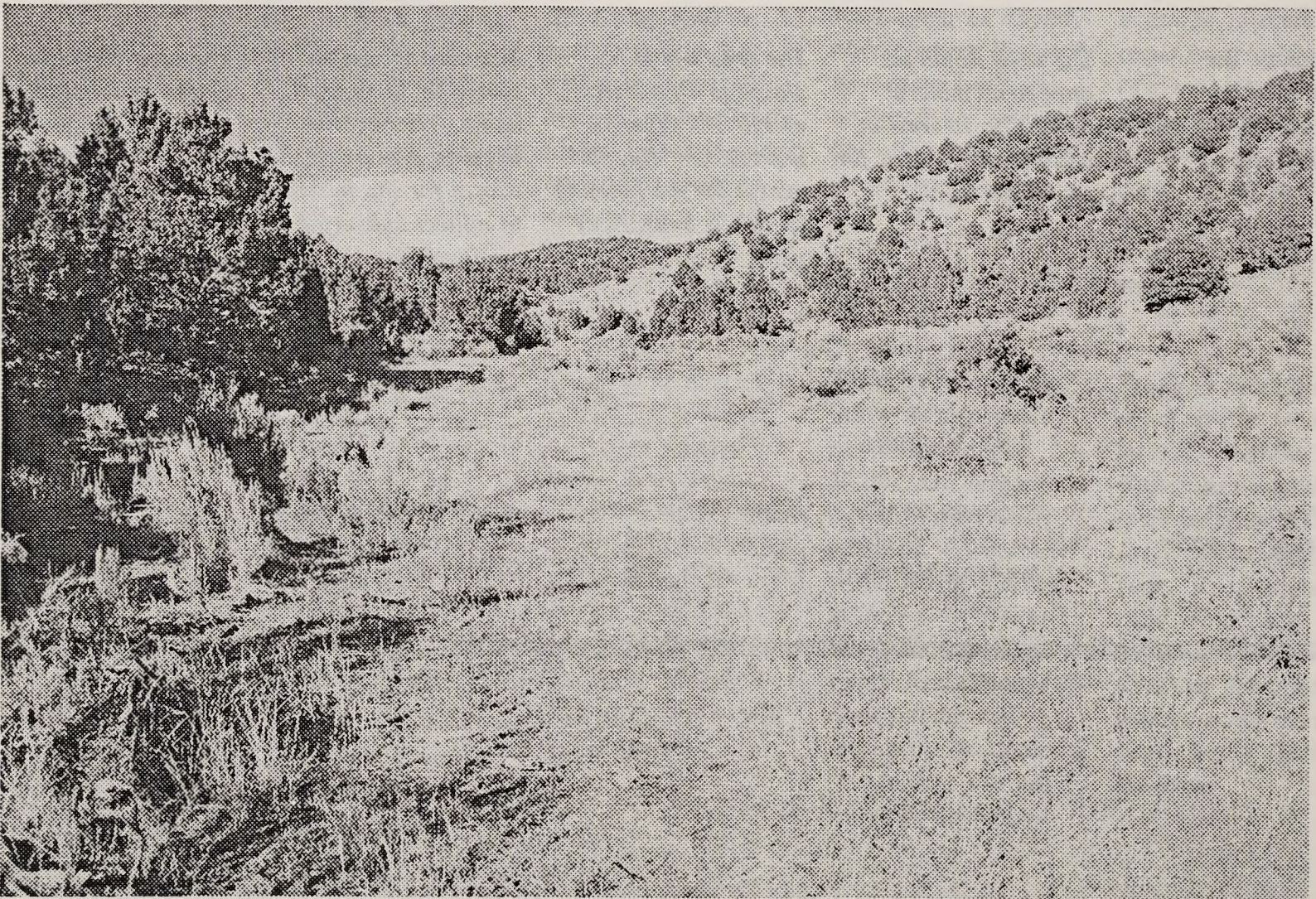
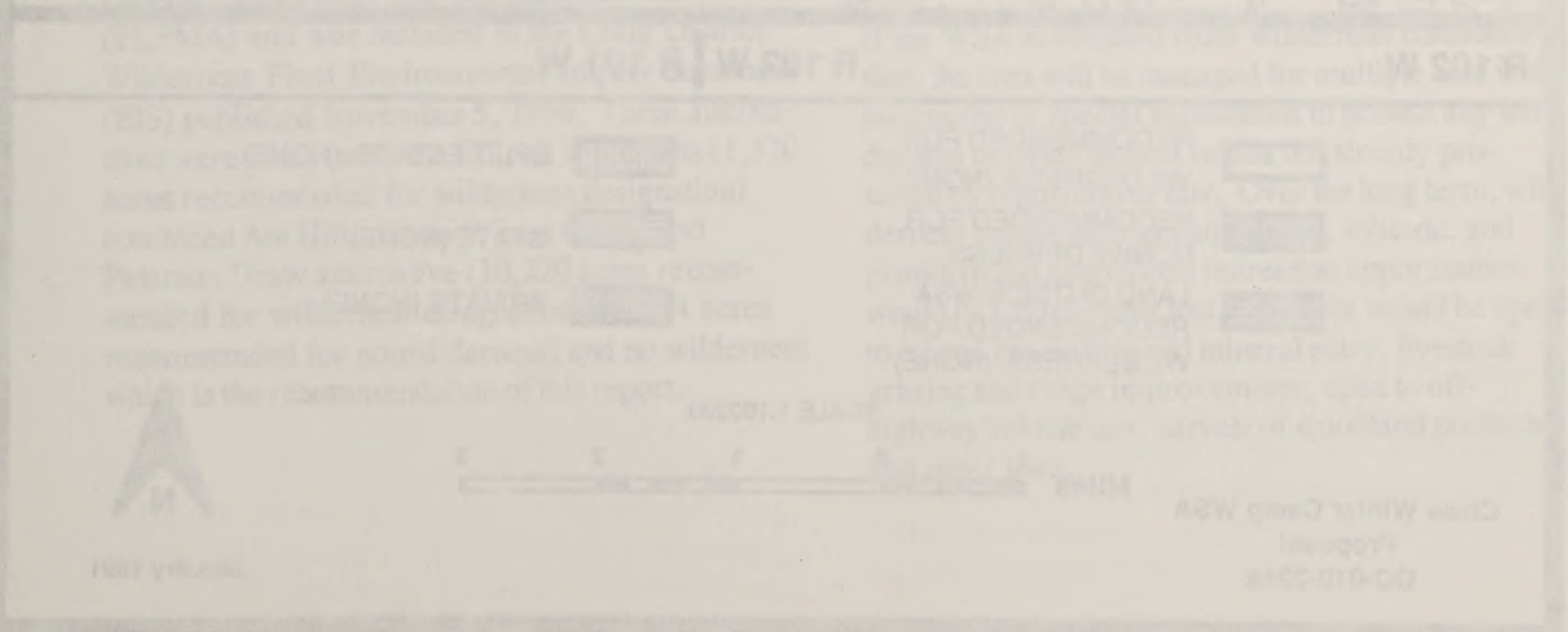
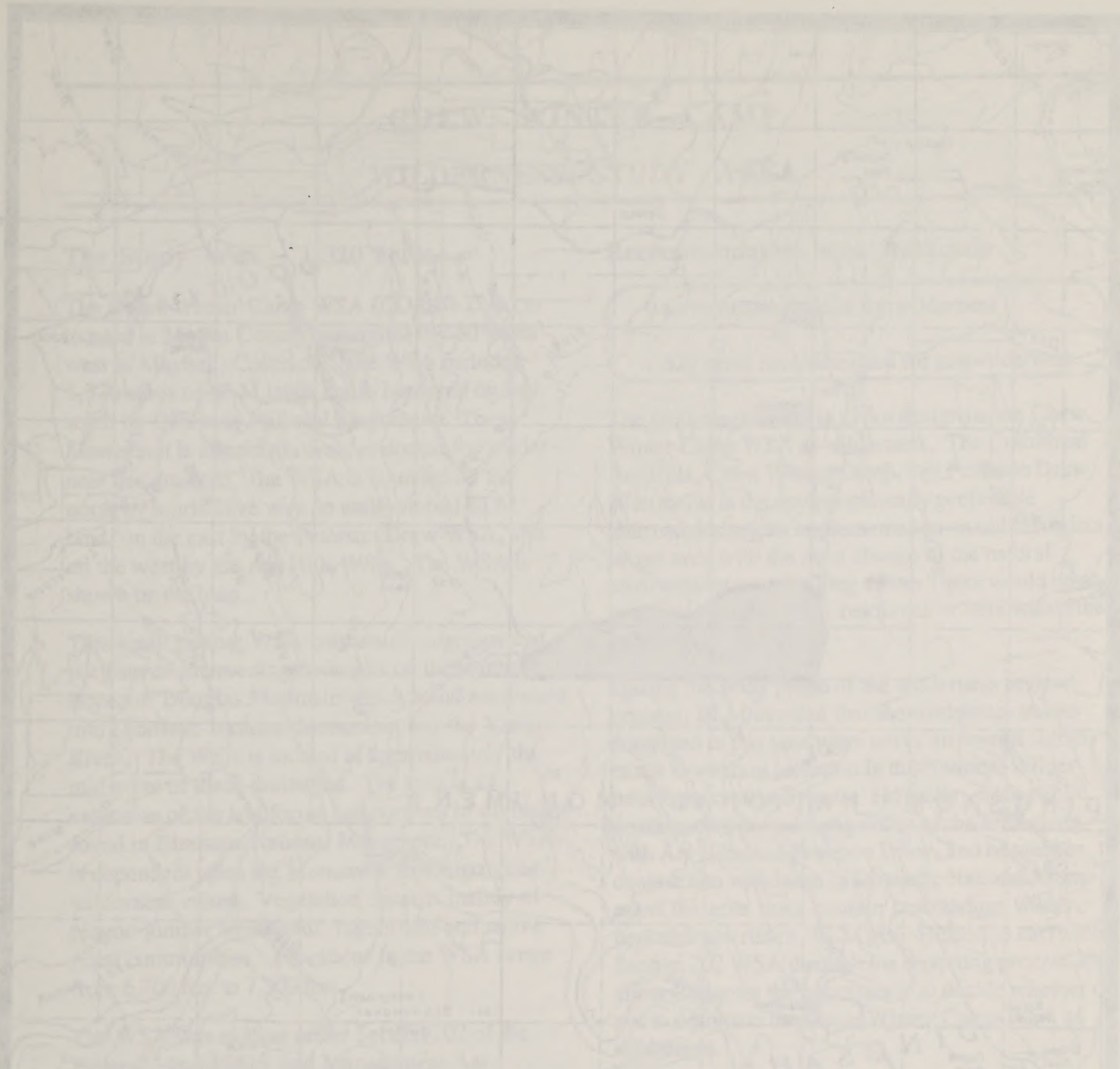
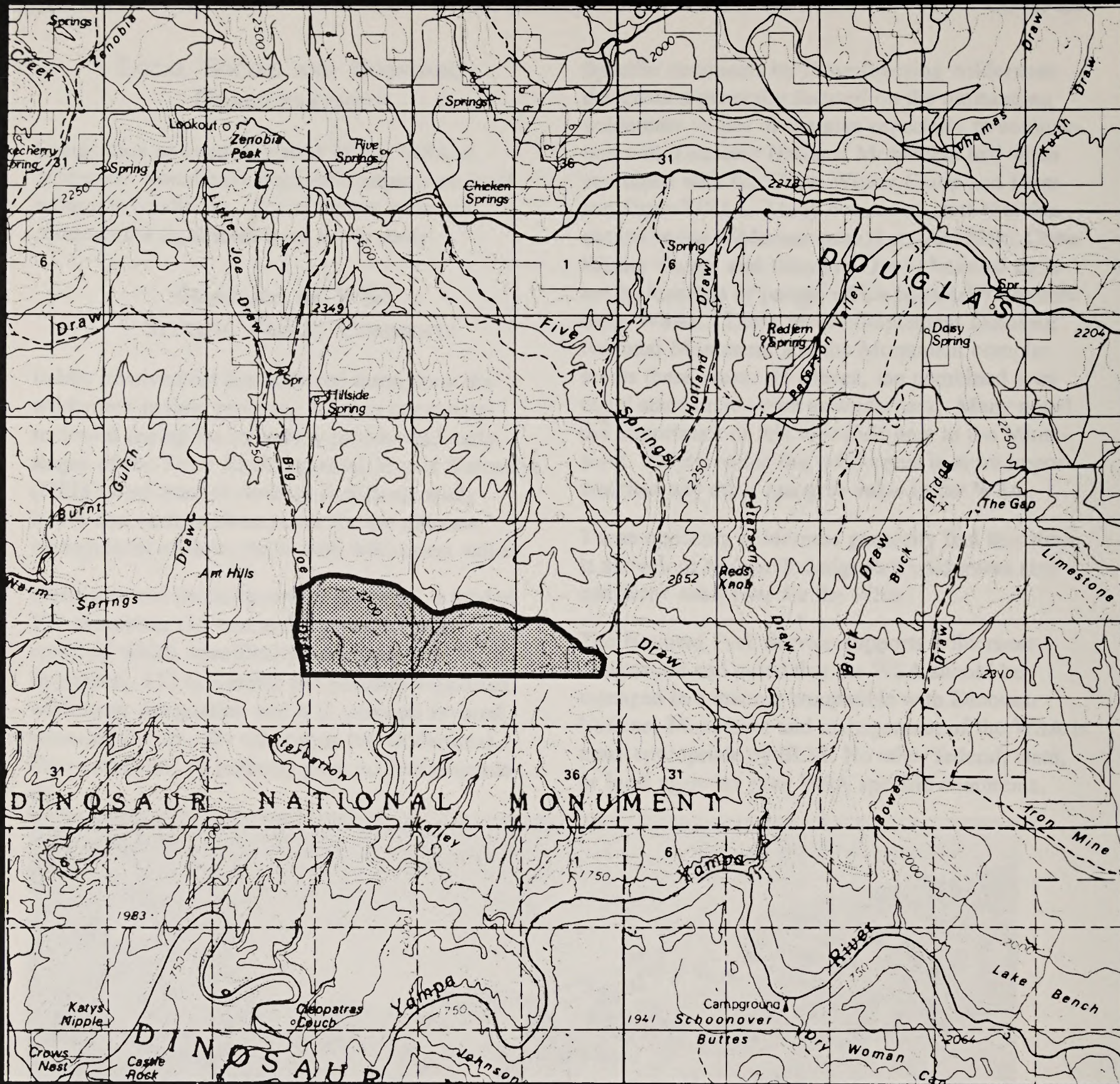


Photo 3. Ant Hills WSA. A way in Big Joe Draw forms the eastern boundary of the Ant Hills WSA.

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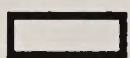
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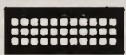
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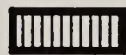
RECOMMENDED FOR
WILDERNESS (NONE)



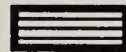
RECOMMENDED FOR
NONWILDERNESS



LAND OUTSIDE WSA
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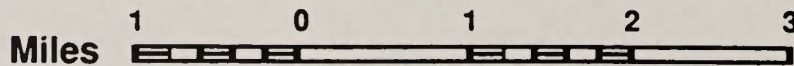


STATE (NONE)



PRIVATE (NONE)

SCALE 1:100000



Chew Winter Camp WSA
Proposal
CO-010-224a



January 1991

CHEW WINTER CAMP WILDERNESS STUDY AREA

The Study Area -- 1,320 acres

The Chew Winter Camp WSA (CO-010-224a) is located in Moffat County approximately 50 miles west of Maybell, Colorado. The WSA includes 1,320 acres of BLM lands and is bordered on the south by Dinosaur National Monument. The Monument is administratively endorsed for wilderness designation. The WSA is bounded on the north by a primitive way on undeveloped BLM land, on the east by the Peterson Draw WSA, and on the west by the Ant Hills WSA. The WSA is shown on the map.

This small remote WSA consists of ridgetops and portions of intervening drainages on the southern slopes of Douglas Mountain which trend southward into Dinosaur National Monument and the Yampa River. The WSA is located at approximately the mid point of these drainages. The area is an extension of the landforms and portions of drainages found in Dinosaur National Monument. The WSA is dependent upon the Monument for outstanding wilderness values. Vegetation consists mainly of pinyon-juniper woodlands, sagebrush, and native grass communities. Elevations in the WSA range from 6,700 feet to 7,300 feet.

The WSA was studied under Section 202 of the Federal Land Policy and Management Act (FLPMA) and was included in the Craig District Wilderness Final Environmental Impact Statement (EIS) published November 5, 1990. Three alternatives were analyzed in the EIS; all wilderness (1,320 acres recommended for wilderness designation), combined Ant Hills, Chew Winter Camp, and Peterson Draw alternative (10,220 acres recommended for wilderness designation and 614 acres recommended for nonwilderness) and no wilderness which is the recommendation of this report.

Recommendation and Rationale

0 acres recommended for wilderness

1,320 acres recommended for nonwilderness

The recommendation is to not designate the Chew Winter Camp WSA as wilderness. The Combined Ant Hills, Chew Winter Camp, and Peterson Draw Alternative is the environmentally preferable alternative since its implementation would result in a larger area with the least change to the natural environment over the long term. There would be no conflicts with any other resources or uses within the area.

During the study phase of the wilderness review process, BLM decided that the wilderness values contained in this area were not of an overall significance to warrant inclusion in the National Wilderness Preservation System. However, since public comment supported designation of the area along with Ant Hills and Peterson Draw, and because in conjunction with lands in Dinosaur National Monument the area does contain outstanding wilderness characteristics, BLM also decided to carry this Section 202 WSA through the reporting process and allow Congress the opportunity to decide whether or not to designate the Chew Winter Camp WSA as wilderness.

If the WSA is released from wilderness consideration, the area will be managed for multiple uses with no specific or special stipulations to protect any wilderness or other natural values not already protected by regulation or law. Over the long term, wilderness values such as naturalness, solitude, and primitive and unconfined recreation opportunities would be irretrievably lost. The area would be open to oil and gas leasing and mineral entry, livestock grazing and range improvements, open to off-highway vehicle use, harvest of woodland products, and other uses.

Table 1 - Land Status and Acreage Summary of the Study Area

<u>Within Wilderness Study Area</u>	<u>Acres</u>
BLM (surface and subsurface)	1,320
Split Estate (BLM surface only)	0
Inholdings (state, private)	<u>0</u>
Total	1,320
<u>Within the Recommended Wilderness Boundary</u>	
BLM (within WSA)	0
BLM (outside WSA)	0
Split Estate (within WSA)	<u>0</u>
Total BLM Land Recommended for Wilderness	0
Inholdings (state, private)	0
<u>Within the Area Not Recommended for Wilderness</u>	
BLM	1,320
Split Estate	<u>0</u>
Total BLM Land Not Recommended for Wilderness	1,320
Inholdings (state, private)	0

Criteria Considered in Developing the Wilderness Recommendations

WILDERNESS CHARACTERISTICS

Naturalness

The Chew Winter Camp WSA is predominately natural in character with negligible human imprints. The area consists of ridgetops and intervening drainages on the southern slopes of Douglas Mountain which trend southward into Dinosaur National Monument and the Yampa River. The WSA is an extension of the landforms and ecosystems of Dinosaur National Monument to the south. The area is located at approximately the midpoint of these drainages. Elevations in the WSA vary from 6,700 feet in the south to 7,300 feet in the north.

Vegetation consists mainly of pinyon-juniper woodlands, sagebrush, and native grass communities. The WSA provides habitat for mule deer and elk. Raptors and other birds, mammals, and reptiles inhabit the WSA.

Only a few minor human imprints are found in the WSA. These consist of 0.25 miles of fence and 1 stock pond. These imprints are scattered or screened by vegetation or topography and are substantially unnoticeable within the area.

Solitude

The rugged topography, dense vegetation, low recreation use, remoteness of the WSA as well as consideration of the adjacent Dinosaur National Monument contribute to the outstanding opportunities to become isolated and truly alone within the



Photo 1. Chew Winter Camp WSA. View east into Five Springs Draw which forms the boundary of the Chew Winter Camp (right) and Peterson Draw (left) WSAs.

WSA. Expansive views into surrounding areas and Dinosaur National Monument also enhances the feeling of solitude.

Primitive and Unconfined Recreation

While opportunities for primitive and unconfined recreation do exist within the WSA, they are limited in extent and are not considered to be outstanding. However, when considered in conjunction with the adjacent Dinosaur National Monument and adjacent WSAs, the opportunities become outstanding. Activities now occurring include hunting, hiking, and horseback riding.

Special Features

The WSA borders Dinosaur National Monument and provides a background viewshed for monument visitors. These 2 areas complement each other. Scattered cultural sites are thought to be present within the WSA but no inventories have been done to verify their existence. There are no other known special features within the WSA.

DIVERSITY IN THE NATIONAL WILDERNESS PRESERVATION SYSTEM

Assessing the diversity of natural systems and features as represented by ecosystems

Wilderness designation of this semi-arid WSA would add a landform and ecosystems which currently have little representation in the National Wilderness Preservation System (NWPS). The Chew Winter Camp WSA is in the central part of the Rocky Mountain Forest Province with a juniper-pinyon woodland (1,320 acres) ecosystem. The juniper-pinyon woodland ecosystem is represented by only 1 small designated wilderness area in Colorado and only 2 areas nationwide. The adjacent Dinosaur National Monument is representative of this ecosystem, but is not designated as wilderness. The Ant Hills, Peterson Draw, and Vale of Tears WSAs are to the west and east and none are recommended for wilderness designation. (See Table 2)

Table 2 - Ecosystem Representation

<u>Bailey-Kuchler Classification</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
Province/Potential Natural Vegetation	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
<i>Nationwide</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	2	41,451	22	167,864
<i>Colorado</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	1	11,181	16	119,424

Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers

The Chew Winter Camp WSA is not within a 5-hour drive of any major population centers. However, the area is within a 6-hour drive of Salt Lake City, Utah and Denver, Colorado.

Balancing the geographic distribution of wilderness areas

The Chew Winter Camp WSA would contribute to balancing the geographic distribution of areas within the National Wilderness Preservation System. The nearest designated wilderness is the High Uintas (460,000 acres) some 100 miles to the west in Utah. However, the landforms and ecosystems of this wilderness area are entirely different than those found in the Chew Winter Camp WSA. The WSA is generally accessible earlier and later in the year than the high alpine wilderness areas. Part of Dinosaur National Monument has been administratively endorsed for wilderness designation.

MANAGEABILITY

The Chew Winter Camp WSA could be effectively managed to preserve its wilderness character. Management is enhanced because the area borders Dinosaur National Monument. Management of the adjacent Monument lands is consistent with wilderness management.

There are no conflicts with any other resources or uses within the WSA. A portion of 1 livestock grazing allotment lies within the WSA with an estimated 98 animal unit months of forage available. Existing range improvements consisting of 1 stock pond and 0.25 miles of fence would continue to receive maintenance.

ENERGY AND MINERAL RESOURCE VALUES

The subsurface geology of the Chew Winter Camp WSA consists of Precambrian metasediments and Paleozoic sediments older than the Weber Sandstone (Hansen, 1980, Hansen et al, 1983), the oldest major reservoir rock in northwest Colorado. The primary reservoir rocks of the region have been eroded off this monoclinally south-dipping area.

Oil and gas interest is minimal with no drillholes in the adjacent several miles (Colorado State oil and gas plats), and little hope for hydrocarbon traps or source rocks. There are no oil and gas leases within this WSA. Spencer (1982) has listed this WSA as having zero petroleum potential. No oil and gas exploration or development is likely in the foreseeable future.

Other mineral resources in this WSA are of negligible value and interest. No mining claims currently exist (BLM mine claim records effective 1-12-89) although copper claims have existed in the past. Uranium mineralization found elsewhere in the



Photo 2. Chew Winter Camp WSA. View south toward Dinosaur National Monument (background) from the Chew Winter Camp WSA (foreground).

Browns Park Formation has not been detected within the WSA. Any mineral materials found in the WSA are of local value only, due to the distance and cost of transporting this commonly found material. Hence, no other mineral interest is likely in the foreseeable future.

IMPACTS ON RESOURCES

The following comparative impact table (Table 3) summarizes the effects on pertinent resources for the 3 alternatives for this WSA.

Table 4 - Comparative Summary of the Impacts by Alternative

Impact Topics	Recommendation: No Wilderness Alternative	All Wilderness Alternative	Combined Ant Hills, Chew Winter Camp, Peterson Draw Alternative
<i>Impacts on Wilderness Characteristics</i>	<i>Wilderness values of naturalness and solitude can be expected to deteriorate over time along the northern boundary in the WSA as a result of surface-disturbing activities related to range improvements and off-road vehicle use.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, and the naturalness of the area would be protected on 1,320 acres.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, and the naturalness of the area would be expanded and legislatively protected on 10,220 acres and lost on 614 acres.</i>

Table 4 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: No Wilderness Alternative	All Wilderness Alternative	Combined Ant Hills, Chew Winter Camp, Peterson Draw Alternative
<i>Impacts on Ranching Operations</i>	<i>Livestock forage production would remain at 98 AUMs. Operating costs associated with range improvement projects would remain at current levels because motor vehicle use would be allowed.</i>	<i>Livestock forage production within the WSA would remain at current levels of 98 AUMs. Operating costs on grazing allotments within the WSA would be slightly higher where livestock operations could be accomplished reasonably without the use of motorized vehicles.</i>	<i>Livestock forage production would remain at current levels of 842 AUMs in the proposed area and 916 AUMs in the original WSAs. Where livestock operations could be accomplished reasonably without the use of motorized vehicles, operating costs would be slightly higher than in portions outside the proposed wilderness.</i>
<i>Impacts on Recreation Use and Quality</i>	<i>Recreational use would remain at current levels of 200 visitor days per year. A slight deterioration of natural settings could be expected through range improvements and off-road vehicle use.</i>	<i>Primitive recreation opportunities would remain unchanged. Visitor use levels would increase slightly from 200 to 250 visitor days per year. Recreational off-road vehicle use (currently less than 10 visitor days per year) would be prohibited.</i>	<i>Primitive recreation opportunities would increase slightly. Visitor use would increase from 900 to 1,150 visitor days per year. Recreational off-road vehicle use (currently 70 visitor days per year) would shift to nonmotorized use or occur outside the area.</i>
<i>Impacts on Water Quality</i>	<i>Because no surface-disturbing activities are expected to occur, there would be no change or impact to water quality.</i>	<i>Because no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>	<i>Because no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>
<i>Impacts on Big Game Species (Populations and Habitat) and Eagles</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 20 deer and 2 elk would remain unchanged. There would be no impact to golden eagles or other raptors.</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 20 deer and 2 elk would remain unchanged. There would be no impact to golden eagles or other raptors.</i>	<i>Wildlife habitat would remain in present conditions. Animals numbers of approximately 162 deer and 9 elk would remain unchanged. There would be no impact to golden eagles or other raptors.</i>

Table 4 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: No Wilderness Alternative	All Wilderness Alternative	Combined Ant Hills, Chew Winter Camp, Peterson Draw Alternative
<i>Impacts on Mineral Exploration and Production</i>	<i>The area would be open to all mineral entry. No interest or activity is expected for any minerals.</i>	<i>The area would be closed to all mineral entry. No negative impacts are expected except for the inability to collect subsur- face geologic data.</i>	<i>The area would be closed to all mineral entry. A negative effect due to the inability to collect subsur- face geologic data would occur. A negative effect to other minerals would result from the inability to explore for copper minerals.</i>
<i>Impacts on Private Lands</i>	<i>No change in ownership or use of nonfederal land is anticipated.</i>	<i>No change in ownership or use of nonfederal land is anticipated.</i>	<i>No change in ownership or use of nonfederal land is anticipated.</i>

LOCAL SOCIAL AND ECONOMIC CONSIDERATIONS

Designation or nondesignation of this WSA as wilderness would have negligible impacts on local economic conditions. Social factors were not considered a significant issue in the study.

SUMMARY OF WSA SPECIFIC PUBLIC COMMENTS

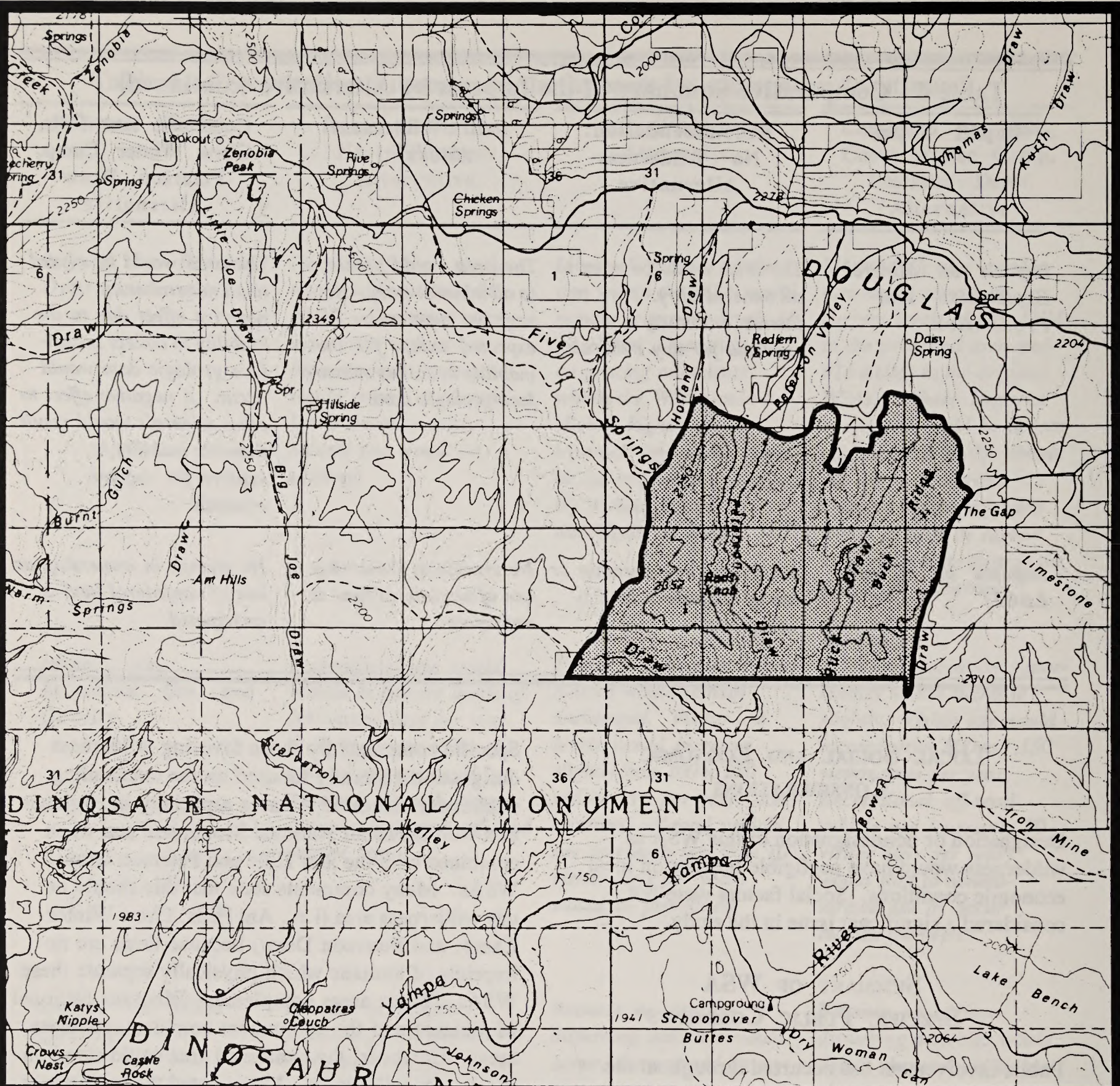
Public involvement has occurred throughout the wilderness review process. Certain comments reviewed during the inventory process and early stages of the Draft Environmental Impact Statement (DEIS) were used to develop significant study issues and various alternatives for the ultimate management of those lands with wilderness values.

During formal public review of the DEIS, a total of 119 comments (35 oral and 84 written) were received which specifically addressed this WSA. In general, 113 comments (95 percent) supported wilderness designation and 4 (3 percent) favored releasing the area for other uses (no wilderness). Two comments (2 percent) gave no recommendation.

Specific comments by those favoring wilderness designation generally focused on the outstanding wilderness values of the area especially in conjunction with Dinosaur National Monument and when combined with the Ant Hills and Peterson Draw WSAs. Many comments state that this should be one wilderness area (i.e., Ant Hills, Chew Winter Camp, and Peterson Draw) because there are no imprints of humans which physically separate these WSAs. These areas complement Dinosaur National Monument and the Monument complements these areas. However, the combined area could stand on it's own as wilderness. Many noted the importance of this viewshed area to the Monument. Others stated that wilderness is more important than any other resource value in the WSA.

Those opposing wilderness generally feel that there is enough or too much designated wilderness now and favor other uses for the WSA.

The National Park Service supports wilderness designation and noted that the WSA should be managed in a manner compatible with Dinosaur National Monument, and management of the WSA is more appropriate by BLM. No other federal, state, or local agencies gave WSA specific comments.

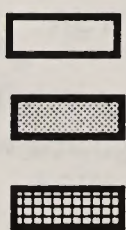


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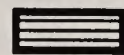
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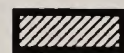
RECOMMENDED FOR
WILDERNESS (NONE)
RECOMMENDED FOR
NONWILDERNESS
LAND OUTSIDE WSA
RECOMMENDED FOR
WILDERNESS (NONE)



SPLIT ESTATE (NONE)

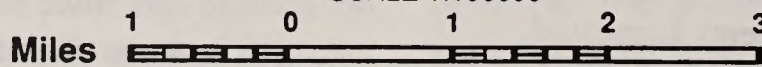


STATE (NONE)



PRIVATE (NONE)

SCALE 1:100000



Peterson Draw WSA
Proposal
CO-010-226



January 1991

PETERSON DRAW

WILDERNESS STUDY AREA

The Study Area -- 5,160 acres

The Peterson Draw WSA (CO-010-226) is located in Moffat County approximately 45 miles west of Maybell, Colorado. The WSA includes 5,160 acres of BLM lands and is bordered on the south by Dinosaur National Monument. The Monument is administratively endorsed for wilderness designation. The WSA is bounded on the north by a road and by private land surrounding the abandoned K-T mine, on the east by a primitive jeep trail on undeveloped BLM lands in Bower Draw and on the west by the Chew Winter Camp WSA in the southwest corner and a primitive jeep trail on undeveloped BLM land. The WSA is shown on the map.

This WSA contains portions of several deep draws, with Peterson, Buck and Five Springs being the most prominent on the southern slopes of Douglas Mountain. These and other intermittent side draws trend southward into Dinosaur National Monument and ultimately the Yampa River. The area is an extension of the landforms and upper end of drainages found in Dinosaur National Monument. The area also contains rocky ridges, peaks, and gently rolling hills. The WSA is dependent upon the Monument for outstanding wilderness values.

Vegetation consists mainly of ponderosa pine forest along the northern boundary, pinyon-juniper woodlands, sagebrush, and native grass communities. Elevations in the WSA range from 6,600 feet to 8,000 feet.

The WSA was studied under Section 202 of the Federal Land Policy and Management Act (FLPMA) and was included in the Craig District Wilderness Final Environmental Impact Statement (EIS) published November 5, 1990. Four alternatives were analyzed in the EIS; all wilderness (5,160 acres recommended for wilderness designation), boundary adjustment alternative (4,580 acres recommended for wilderness designation and 580 acres recommended for nonwilderness), combined Ant Hills, Chew Winter Camp, and Peterson Draw alternative (10,220 acres recommended for wilder-

ness designation and 614 acres recommended for nonwilderness), and no wilderness which is the recommendation of this report.

Recommendations and Rationale

0 acres recommended for wilderness

5,160 acres recommended for nonwilderness

The recommendation is to not designate the Peterson Draw WSA as wilderness. The combined Ant Hills, Chew Winter Camp, and Peterson Draw alternative is the environmentally preferable alternative since its implementation would result in a larger area with the least change to the natural environment over the long term. There would be no conflicts with any other resources or uses within the area.

During the study phase of the wilderness review process, BLM decided that the wilderness values contained in this area were not of an overall significance to warrant inclusion in the National Wilderness Preservation System. However, since public comment supported designation of the area along with Ant Hills and Chew Winter Camp, and in conjunction with lands in Dinosaur National Monument the area does contain outstanding wilderness characteristics, BLM also decided to carry this Section 202 WSA through the reporting process and allow Congress the opportunity to decide whether or not to designate the Peterson Draw WSA as wilderness.

If the WSA is released from wilderness consideration, the area will be managed for multiple uses with no specific or special stipulations to protect any wilderness or other natural values not already protected by regulation or law. Over the long term wilderness values such as naturalness, solitude, and primitive and unconfined recreation opportunities would be lost. The area would be open to oil and gas leasing and mineral entry, livestock grazing and range improvements, open to off-highway vehicle use, harvest of forest products, and other uses.

Table 1 - Land Status and Acreage Summary of the Study Area

<u>Within Wilderness Study Area</u>	<u>Acres</u>
BLM (surface and subsurface)	5,160
Split Estate (BLM surface only)	0
Inholdings (state, private)	<u>0</u>
Total	5,160
<u>Within the Recommended Wilderness Boundary</u>	
BLM (within WSA)	0
BLM (outside WSA)	0
Split Estate (within WSA)	<u>0</u>
Total BLM Land Recommended for Wilderness	0
Inholdings (state, private)	0
<u>Within the Area Not Recommended for Wilderness</u>	
BLM	5,160
Split Estate	<u>0</u>
Total BLM Land Not Recommended for Wilderness	5,160
Inholdings (state, private)	0

Criteria Considered in Developing the Wilderness Recommendations

WILDERNESS CHARACTERISTICS

Naturalness

The Peterson Draw WSA is predominately natural in character with negligible human imprints. The area consists of portions of several steep draws and drainages on the southern slopes of Douglas Mountain which trend southward into Dinosaur National Monument and ultimately the Yampa River. The WSA is an extension of the landforms and ecosystems of Dinosaur National Monument to the south. The area also consists of valleys, rocky ridges, peaks, and gently rolling hills. (See Photo 1)

Elevations in the WSA vary from 6,600 feet in the south to 8,000 feet in the north.

Vegetation consists mainly of pinyon-juniper woodlands, sagebrush, and native grass communities. Ponderosa pine forest, set in red sandstone outcrops, dominate the northern boundary. (See Photo 2) Mountain brush species and aspen trees are scattered along the northern boundary. The WSA provides habitat for mule deer and elk. Raptors and other birds, mammals, and reptiles inhabit the WSA.

Only a few minor human imprints are found in the WSA. These consist of 2 stock ponds, 1 checkdam, 1 water pipeline, 1 developed spring, 3.25 miles of fence, and 1.5 miles of ways. All these imprints are



Photo 1. Peterson Draw WSA. View southeast into Buck Draw.

scattered or screened by vegetation or topography and are substantially unnoticeable within the area. Private lands surrounding the abandoned K-T Copper Mine forms a portion of the northern boundary. The mine site is on patented and unpatented claims adjacent to the WSA. Due to mapping errors during the original inventory, parts of the mine and related debris were included in the WSA. A survey in 1987 established claim locations and dictated corresponding minor changes in the WSA boundary.

Solitude

Opportunities to experience solitude within the WSA are considered to be outstanding. The rugged topography, dense vegetation, low recreation use, remoteness of the WSA as well as consideration of the adjacent Dinosaur National Monument contribute to the outstanding opportunities to become isolated and truly alone within the WSA. Expansive views into surrounding areas and Dinosaur National Monument also enhances the feeling of solitude.

Primitive and Unconfined Recreation

While opportunities for primitive and unconfined recreation do exist within the WSA, they are limited in extent and are not considered to be outstanding. However, when considered in conjunction with the adjacent Dinosaur National Monument, the opportunities become outstanding. Activities now occurring include hunting, hiking, horseback riding, and camping.

Special Features

The WSA borders Dinosaur National Monument and provides a background viewshed for monument visitors. These 2 areas complement each other. Scattered cultural sites are thought to be present within the WSA but no inventories have been done to verify their existence. There are no other known special features within the WSA.

**DIVERSITY IN THE NATIONAL WILDERNESS
PRESERVATION SYSTEM**

*Assessing the diversity of natural systems
and features as represented by ecosystems*

Wilderness designation of this semi-arid WSA would add a landform and ecosystems which currently have little representation in the National Wilderness Preservation System (NWPS). Peterson Draw WSA is in the central part of the Rocky Mountain Forest Province with juniper-pinyon woodland

(4,160 acres) and sagebrush steppe (1,000 acres) ecosystems. The sagebrush steppe ecosystem is not represented in the NWPS in Colorado. The juniper-pinyon woodland ecosystem is represented by only 1 small designated wilderness area in Colorado and only 2 areas nationwide. The adjacent Dinosaur National Monument is representative of these ecosystems, but is not designated as wilderness. The Chew Winter Camp, Ant Hills, and Vale of Tears WSAs are to the east and west and none are recommended for wilderness designation. (See Table 2)

Table 2 - Ecosystem Representation

<u>Bailey-Kuchler Classification</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
<u>Province/Potential Natural Vegetation</u>	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
<i>Nationwide</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	2	41,451	22	167,864
Sagebrush Steppe	4	76,129	22	241,526
<i>Colorado</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	1	11,181	16	119,424
Sagebrush Steppe	0	0	9	31,960

*Expanding the opportunities for solitude or
primitive recreation within a day's driving
time (five hours) of major population centers*

The Peterson Draw WSA is not within a 5-hour drive of any major population centers. However, the area is within a 6-hour drive of Salt Lake City, Utah and Denver, Colorado.

*Balancing the geographic distribution of
wilderness areas*

The Peterson Draw WSA would contribute to balancing the geographic distribution of areas within the National Wilderness Preservation System. The nearest designated wilderness is the High Uintas (460,000 acres) some 100 miles to the west in Utah.

However, the landforms and ecosystems of this wilderness area are entirely different than those found in the Peterson Draw WSA. The WSA is generally accessible earlier and later in the year than the high alpine wilderness areas. Part of Dinosaur National Monument has been administratively endorsed for wilderness designation.

MANAGEABILITY

The Peterson Draw WSA could be effectively managed to preserve its wilderness character. Management is enhanced because the area borders Dinosaur National Monument on the south. Management of the adjacent Monument lands is consistent with wilderness management. There are no



Photo 2. Peterson Draw WSA. Ponderosa pine forest set in red sandstone outcrops dominate the higher elevations along the northern portions of the Peterson Draw WSA.

conflicts with any other resources or uses within the WSA. Portions of 4 livestock grazing allotments lie within the WSA with an estimated 496 animal unit months (AUMs) of forage available. Existing range improvements consisting of 1 checkdam, 2 stock ponds, 1 water pipeline, 1 developed spring, and 3.25 miles of fence would continue to receive maintenance.

ENERGY AND MINERAL RESOURCE VALUES

The subsurface geology of the Peterson Draw WSA consists of Precambrian metasediments and Paleozoic sediments older than the Weber Sandstone (Hansen, 1980, Hansen *et al*, 1983), the oldest major reservoir rock in northwest Colorado. The primary reservoir rocks of the region have been eroded off this monoclinal south-dipping area.

Oil and gas interest is minimal with no drillholes in the adjacent several miles (Colorado State oil and gas plats), and little hope for hydrocarbon traps or source rocks. There are no oil and gas leases within

this WSA. Spencer (1982) has listed this WSA as having zero petroleum potential. No oil and gas exploration or development is likely in the foreseeable future.

Interest in copper mineralization and mining has occurred adjacent to the north boundary of the Peterson Draw WSA from the turn of the century to recent times. The K-T mine has produced and shipped copper from Section 16, Township 7 North, Range 101 West. The copper mineralization appears to be concentrated at the intersection of major joints, minor faults, and the Madison Limestone-Lodore Formation contact. Copper ores of 12 to 16+ percent Cu have been sampled from the mine (Krull, 1902).

Current copper economics have stifled additional development and the bulk of potential mineralization has been mined out. There will continue to be minimal interest and activity for this resource in the foreseeable future on the existing mining claims.

IMPACTS ON RESOURCES

The following comparative impact table (Table 3) summarizes the effects on pertinent resources for the 4 alternatives for this WSA.

Table 3 - Comparative Summary of the Impacts by Alternative

Impact Topics	Recommendation: No Wilderness Alternative	Boundary Adjustment Alternative	All Wilderness Alternative	Combined Ant Hills, Chew Winter Camp, Peterson Draw Alternative
<i>Impacts on Wilderness Characteristics</i>	<i>Wilderness values of naturalness and solitude could be expected to deteriorate over time in the northern half of the WSA as a result of surface-disturbing activities related to range improvements, firewood cutting, mineral exploration, and off-road vehicle use.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, and the naturalness of the area would be protected on 4,580 acres.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, and the naturalness of the area would be protected on 5,160 acres.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, and the naturalness of the area would be expanded and legislatively protected on 10,220 acres and lost on 614 acres.</i>
<i>Impacts on Ranching Operations</i>	<i>Livestock forage production would remain at 496 AUMs. Operating costs associated with range improvement projects would remain at current levels because motor vehicle use would be allowed.</i>	<i>Livestock forage production within the proposed area would remain at current levels of 426 AUMs and 496 AUMs within the original WSA. Operating costs on grazing allotments within the proposed area would be slightly higher where livestock operations could be accomplished reasonably without the use of motorized vehicles.</i>	<i>Livestock forage production within the WSA would remain at current levels of 496 AUMs. Operating costs on grazing allotments within the WSA would be slightly higher where livestock operations could be accomplished reasonably without the use of motorized vehicles.</i>	<i>Livestock forage production would remain at current levels of 842 AUMs in the proposed area and 916 AUMs in the original WSAs. Where livestock operations could be accomplished reasonably without the use of motorized vehicles, operating costs would be slightly higher than in portions outside the proposed wilderness.</i>

Table 3 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: No Wilderness Alternative	Boundary Adjustment Alternative	All Wilderness Alternative	Combined Ant Hills, Chew Winter Camp, Peterson Draw Alternative
<i>Impacts on Water Quality</i>	<i>Because no surface-disturbing activities are expected to occur, there would be no change or impact to water quality.</i>	<i>Because no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>	<i>Because no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>	<i>Because no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>
<i>Impacts on Big Game Species (Populations and Habitat) and Eagles</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 77 deer and 3 elk would remain unchanged. There would be no impact to golden eagles or other raptors.</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 77 deer and 3 elk would remain unchanged. There would be no impact to golden eagles or other raptors.</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 77 deer and 3 elk would remain unchanged. There would be no impact to golden eagles or other raptors.</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 162 deer and 9 elk would remain unchanged. There would be no impact to golden eagles or other raptors.</i>
<i>Impacts on Mineral Exploration and Production</i>	<i>The area would be open to all mineral entry. Some activity would be anticipated in exploration for copper minerals, but no production is expected.</i>	<i>The area would be closed to all mineral entry. A negative effect due to the inability to collect subsurface geologic data would occur. A negative effect to other minerals would result from the inability to explore for copper minerals.</i>	<i>The area would be closed to all mineral entry. A negative effect due to the inability to collect subsurface geologic data would occur. A negative effect to other minerals would result from the inability to explore for copper minerals.</i>	<i>The area would be closed to all mineral entry. A negative effect due to the inability to collect subsurface geologic data would occur. A negative effect to other minerals would result from the inability to explore for copper minerals.</i>
<i>Impacts on Private Lands</i>	<i>No change in ownership or use of nonfederal land is anticipated.</i>	<i>No change in ownership or use of nonfederal land is anticipated.</i>	<i>No change in ownership or use of nonfederal land is anticipated.</i>	<i>No change in ownership or use of nonfederal land is anticipated.</i>
<i>Impacts on Recreation Use and Quality</i>	<i>Recreational use would remain at current levels of 400 visitor days per year. A slight deterioration of natural settings could be expected through maintenance of range improvements, firewood cutting, mineral exploration, and off-road vehicle use.</i>	<i>Primitive recreation opportunities would remain unchanged. Visitor use levels would increase slightly from 400 to 500 visitor days per year. Recreational off-road vehicle use would be prohibited.</i>	<i>Primitive recreation opportunities would remain unchanged. Visitor use levels would increase slightly from 400 to 500 visitor days per year. Recreational off-road vehicle use would be prohibited.</i>	<i>Primitive recreation opportunities would increase slightly. Visitor use would increase from 900 to 1,150 visitor days per year. Recreational off-road vehicle use (currently 70 visitor days per year) would shift to nonmotorized use or occur outside the area.</i>

LOCAL SOCIAL AND ECONOMIC CONSIDERATIONS

Designation or nondesignation of this WSA as wilderness would have negligible impacts on local economic conditions. Social factors were not considered a significant issue in the study.

SUMMARY OF WSA SPECIFIC PUBLIC COMMENTS

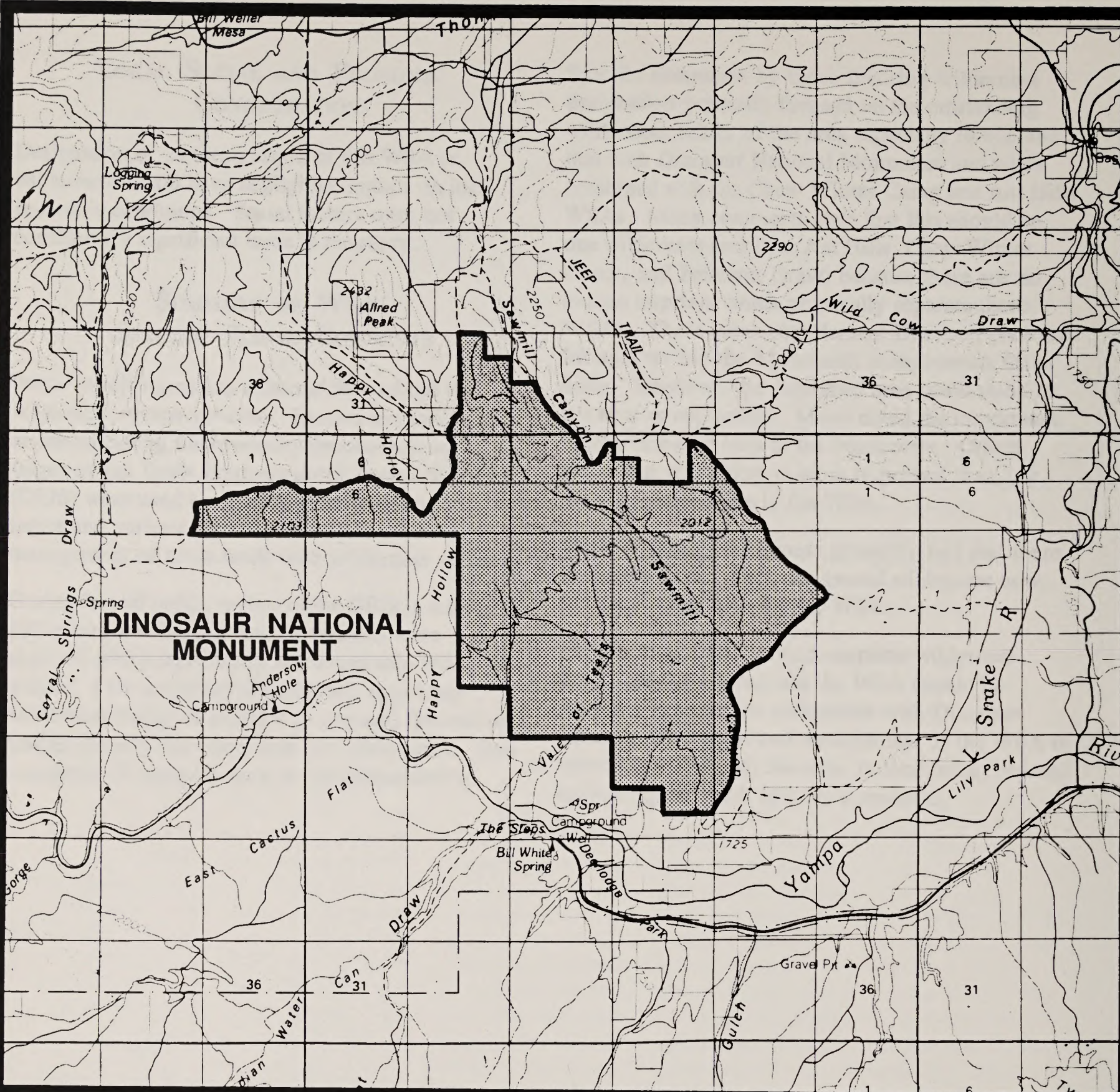
Public involvement has occurred throughout the wilderness review process. Certain comments reviewed during the inventory process and early stages of the Draft Environmental Impact Statement (DEIS) were used to develop significant study issues and various alternatives for the ultimate management of those lands with wilderness values.

During formal public review of the DEIS, a total of 116 comments (35 oral and 81 written) were received which specifically addressed this WSA. In general, 110 comments (95 percent) supported wilderness designation and 4 (3 percent) favored releasing the area for other uses (no wilderness). Two comments (2 percent) gave no recommendation.

Specific comments by those favoring wilderness designation generally focused on the outstanding wilderness values of the area especially in conjunction with Dinosaur National Monument and when combined with the Chew Winter Camp and Ant Hills WSAs. Many comments state that this should be one wilderness area (i.e. Ant Hills, Chew Winter Camp, and Peterson Draw) because there are no human imprints which physically separate these WSAs. These areas complement Dinosaur National Monument and the Monument complements these areas. However, the combined area could stand on its own as wilderness. Many noted the importance of this viewshed area to the Monument. Others stated that wilderness is more important than any other resource value in the WSA.

Those opposing wilderness generally feel that there is enough or too much designated wilderness now and favor other uses for the WSA.

The National Park Service supports wilderness designation and noted that the WSA should be managed in a manner compatible with Dinosaur National Monument and management of the WSA is appropriate by BLM. No other federal, state, or local agencies gave WSA specific comments.



T 7 N
T 6 N

R 100 W

R 99 W



RECOMMENDED FOR
WILDERNESS (NONE)



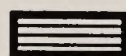
RECOMMENDED FOR
NONWILDERNESS



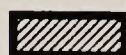
LAND OUTSIDE WSA
RECOMMENDED FOR
WILDERNESS (NONE)



SPLIT ESTATE (NONE)

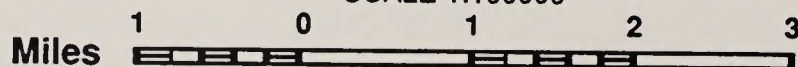


STATE (NONE)



PRIVATE (NONE)

SCALE 1:100000



Vale of Tears WSA
Proposal
CO-010-229 d

January 1991

VALE OF TEARS

WILDERNESS STUDY AREA

The Study Area -- 7,420 acres

The Vale of Tears WSA (CO-010-229d) is located in Moffat County approximately 25 miles west of Maybell, Colorado. The WSA contains 7,420 acres of BLM land. The WSA is bounded on the south by Dinosaur National Monument. The west boundary follows a primitive way through undeveloped BLM land and undeveloped private land. The north boundary consists of private land and a dirt road through BLM land. The east boundary is an abandoned way through undeveloped BLM land. The area is shown on the map.

This remote WSA is located on the southern slopes of the southeastern end of Douglas Mountain within one-half mile of the Yampa River in Dinosaur National Monument. The area is a continuation of the landforms found in Dinosaur National Monument. The upper two-thirds of several draws and drainages are within the WSA. The Vale of Tears drainage in the southern part of the WSA has the appearance of colorful badlands with banded multicolored soil. (See Photo 1) The rugged Sawmill Canyon cuts through the eastern part of the WSA. The remainder of the area consists of ridges, peaks, and draws which contribute to the ruggedness of this WSA. (See Photo 2)

Vegetation consists of dense pinyon-juniper woodlands with sagebrush and saltbush/greasewood communities at lower elevations. Elevations span 2,000 feet from 5,800 feet in the south to 7,800 feet in the north. The area provides habitat for mule deer and elk as well as birds of prey and numerous other birds, mammals, and reptiles.

The WSA was studied under Section 202 of the Federal Land Policy and Management Act (FLPMA) and was included in the Craig District Final Wilderness Environmental Impact Statement published November 5, 1990. Two alternatives were analyzed: all wilderness (7,420 acres recommended for wilderness designation) and no wilderness, the recommendation of this report.

Recommendation and Rationale

0 acres recommended for wilderness

7,420 acres recommended for nonwilderness

The recommendation is to not designate the Vale of Tears WSA as wilderness and to release the area for uses other than wilderness as presented in the Little Snake Resource Management Plan. The all wilderness alternative is the environmentally preferable alternative since its implementation would result in the least change to the natural environment over the long term.

During the study phase of the wilderness review process, BLM decided that the wilderness values contained in this area were not as important as other resource values and uses such as livestock grazing and mineral development. However, since public comment supported designation of the area, and in conjunction with lands in Dinosaur National Monument the area contains outstanding opportunities for solitude and primitive unconfined recreation, BLM has decided to carry this Section 202 WSA through the reporting process and allow Congress the opportunity to decide whether or not to designate the Vale of Tears WSA as wilderness. The WSA would be managed under multiple-use management once released. Most or all of the wilderness values such as naturalness, solitude, and primitive and unconfined recreation opportunities would eventually be irretrievably lost over the long term. The area would be open to oil and gas leasing and mineral entry, livestock grazing and range improvements, open to off-highway vehicle use, harvest of forest or woodland products, and other uses incompatible with wilderness management.

There would be no special stipulations or protection for any wilderness values although there would be essentially no major conflict with any resource or use if the area was designated as wilderness.

Table 1 - Land Status and Acreage Summary of the Study Area

<u>Within Wilderness Study Area</u>	<u>Acres</u>
BLM (surface and subsurface)	7,420
Split Estate (BLM surface only)	0
Inholdings (state, private)	<u>0</u>
Total	7,420
<u>Within the Recommended Wilderness Boundary</u>	
BLM (within WSA)	0
BLM (outside WSA)	0
Split Estate (within WSA)	<u>0</u>
Total BLM Land Recommended for Wilderness	0
Inholdings (state, private)	0
<u>Within the Area Not Recommended for Wilderness</u>	
BLM	7,420
Split Estate	<u>0</u>
Total BLM Land Not Recommended for Wilderness	7,420
Inholdings (state, private)	0

CRITERIA CONSIDERED IN DEVELOPING THE WILDERNESS RECOMMENDATIONS

WILDERNESS CHARACTERISTICS

Naturalness

The Vale of Tears WSA is predominately natural in character with negligible human imprints. This remote WSA is located on the southern slopes of the southeastern end of Douglas Mountain. The upper two-thirds of several draws and drainages lie within the area and drain southward into Dinosaur National Monument and the Yampa River. The landforms are an extension of those found in Dinosaur National Monument.

The Vale of Tears drainage in the southern part of the WSA has the appearance of badlands with

red, yellow, tan, brown, and gray colored and highly eroded soils. The remainder of the area consists of ridges, small canyons, draws, and peaks providing rugged topography. Elevations in the WSA range from 5,800 feet in the lower, southern portion of the Vale of Tears drainage to 7,800 feet on a peak in the northern part of the WSA.

Vegetation consists of dense pinyon-juniper woodlands with sagebrush and saltbush communities. The WSA supports mule deer, elk, and birds of prey as well as numerous other birds, mammals, and reptiles.

The WSA exhibits a high quality natural appearance with few human imprints. Range improvements consisting of 0.5 miles of fence and 1 stock pond are minor, scattered, and remain substantially unnoticeable within the study area.



Photo 1. Vale of Tears WSA. Aerial view north into the colorful Vale of Tears drainage.

Solitude

Due to the diverse topography, dense vegetation, limited accessibility, low use and remoteness of the WSA, opportunities to experience solitude are outstanding. When considered in conjunction with Dinosaur National Monument, the opportunities are ideal. A visitor may become isolated in the canyons and draws, or because of the low use in the area, is already isolated from other people when entering the area. A sense of vast open space from the expansive views at high points in the WSA enhances the feeling of solitude.

Primitive and Unconfined Recreation

While opportunities for primitive and unconfined recreation do exist within the WSA, they are limited in extent. However, when considered with the adjacent Dinosaur National Monument, the opportunities become outstanding and the areas complement each other. The WSA provides a

background viewshed for Monument visitors.

Some groups who are rafting on the Yampa River in Dinosaur National Monument stop at the colorful Vale of Tears for hikes up into this area. Other activities occurring within the area include hunting and horseback riding.

Special Features

Scattered cultural sites are thought to be present within the WSA but no inventories have been done to verify their existence. There have been no inventories for threatened or endangered plants and animals. The WSA provides a background viewshed for visitors to Dinosaur National Monument and a portion of the area can be seen from Deerlodge Park and the campground. No other special features are known within the WSA at this time.

DIVERSITY IN THE NATIONAL WILDERNESS
PRESERVATION SYSTEM

Assessing the Diversity of Natural Systems
and Features as Represented by Ecosystems

Wilderness designation of this semi-arid WSA
would add a landform and ecosystem which
currently has little representation in the National

Wilderness Preservation System. The WSA lies in
the central portion of the Rocky Mountain Forest
Province and has been classified as having a
juniper-pinyon woodland potential natural vegeta-
tion type (7,420 acres). There is only one wilder-
ness area in Colorado and only 2 small areas
nationwide with this ecosystem. Dinosaur National
Monument is representative of this ecosystem but
is not designated wilderness (refer to Table 2).

Table 2 - Ecosystem Representation

<u>Bailey-Kuchler Classification</u>	<u>NWPS Areas</u>		<u>Other BLM Studies</u>	
Province/Potential Natural Vegetation	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
<i>Nationwide</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	2	41,451	21	163,574
<i>Colorado</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	1	11,181	15	115,134

Expanding the opportunities for solitude or
primitive recreation within a day's driving
time (five hours) of major population centers

The Vale of Tears WSA is not within a 5-hour drive
of any population centers. However, the area is
within a 5-1/2 to 6-hour drive of both Salt Lake City,
Utah and Denver, Colorado.

Balancing the geographic distribution of
wilderness areas

The Vale of Tears WSA would contribute to bal-
ancing the geographic distribution of areas within
the National Wilderness Preservation System.
The nearest designated wilderness areas are the
High Uintas (460,000 acres) 130 miles to the west
in Utah and the Flat Tops Wilderness (235,035
acres) 70 miles to the southwest in Colorado.
However, the landforms and ecosystems of these
wilderness areas are entirely different than those
found in the WSA. Thus, the WSA provides
different environmental settings for a variety of ex-

periences. Part of Dinosaur National Monument
adjacent to the WSA has been administratively
endorsed for wilderness designation. The Vale of
Tears WSA complements Dinosaur National
Monument and allows physical access to the
Monument from the north. The Cross Mountain
WSA lies 5 miles to the east and is recommended
for wilderness designation. However, Cross
Mountain is a different landform than Vale of Tears.
The Ant Hills, Chew Winter Camp, and Peterson
Draw WSAs lie some 10 to 15 miles due west but
none of these are recommended for wilderness.
Another 5 WSAs are within 2-hours drive of the
Vale of Tears WSA.

MANAGEABILITY

The remote Vale of Tears WSA could be effectively
managed to preserve its wilderness character. The
entire southern boundary is shared with Dinosaur
National Monument. Management of the Monu-
ment lands is consistent with wilderness manage-
ment.



Photo 2. Vale of Tears WSA. View into the Vale of Tears WSA from the northeast boundary.

There are no conflicts with other resources or uses of the WSA. Portions of 3 livestock grazing allotments lie within the WSA with an estimated 746 animal unit months of forage. Maintenance of existing range improvements would continue and no new range improvements are planned at this time.

ENERGY AND MINERAL RESOURCE VALUES

The subsurface geology of the Vale of Tears WSA consists of Precambrian metasediments and Paleozoic sediments older than the Weber Sandstone (Hansen, 1980 *et al*, 1983), the oldest major reservoir rock in northwest Colorado. The primary reservoir rocks of the region have been eroded off this monoclinally southeast-dipping area of Douglas Mountain.

Oil and gas interest is minimal, with no drillholes on adjacent land for several miles (Colorado State oil and gas plats) and little hope for hydrocarbon traps

or source rocks. There is 1 post-FLPMA oil and gas lease within this WSA. Spencer (1982) has listed this WSA as having zero petroleum potential. No oil or gas development is likely in the future.

Other mineral resources in this WSA are of negligible value. No mining claims currently exist (BLM mine claim records effective 1-12-89) although copper claims have existed in the past. Uranium mineralization found elsewhere in the Browns Park Formation has not been found within the WSA. Any mineral materials in the WSA are of local value, due to the distance and cost of transporting the more commonly found material. Hence, no other mineral interest is likely in the future.

IMPACTS ON RESOURCES

The following comparative impact tale (Table 3) summarizes the effects on pertinent resources for 2 alternatives for this WSA.

Table 3 - Comparative Summary of the Impacts by Alternative

Impact Topics	Recommendation: No Wilderness Alternative	All Wilderness Alternative
<i>Impacts on Wilderness Characteristics</i>	<i>Wilderness values of naturalness and solitude could be expected to deteriorate over time on approximately 50 percent of the WSA as a result of surface-disturbing activities related to range improvements and off-road vehicle use.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, and the naturalness of the area would be protected on the 7,420 acres.</i>
<i>Impacts on Ranching Operations</i>	<i>Livestock forage production would increase by about 18 percent of 135 AUMs. Operating costs associated with range improvement projects would remain at current levels because motor vehicle use would be allowed.</i>	<i>Livestock forage production within the WSA would remain at current levels of 746 AUMs. Operating costs on grazing allotments within the WSA would be slightly higher where livestock operations could be accomplished reasonably without the use of motorized vehicles.</i>
<i>Impacts on Recreation Use and Quality</i>	<i>Recreation use would remain at current levels of 150 visitor days per year. Deterioration of the natural settings could be expected through maintenance of existing range improvements, construction of new improvements, and off-road vehicle use.</i>	<i>Primitive recreation opportunities would remain unchanged. Visitor use levels would increase from 150 to 300 visitor days per year. Recreational off-road vehicle use (currently less than 10 visitor days per year) would shift to nonmotorized use.</i>
<i>Impacts on Water Quality</i>	<i>Because no appreciable surface-disturbing activities are expected to occur, there would be no damage or impact to water quality.</i>	<i>Because no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>
<i>Impacts on Big Game Species (Populations and Habitat) and Eagles</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 110 deer and 3 elk would remain unchanged. There would be no impact to golden eagles or other raptors.</i>	<i>Wildlife habitat would remain in present conditions. Animal numbers of approximately 110 deer and 3 elk would remain unchanged. There would be no impact to golden eagles or other raptors.</i>
<i>Impacts on Mineral Exploration and Production</i>	<i>The area would be open to all mineral entry. Little interest or activity is expected for any minerals.</i>	<i>The area would be closed to all mineral entry. No negative impacts are expected except for the inability to collect subsurface geologic data.</i>
<i>Impacts on Private Lands</i>	<i>No change in ownership or use of nonfederal land is anticipated.</i>	<i>No change in ownership or use of nonfederal land is anticipated.</i>

LOCAL SOCIAL AND ECONOMIC CONSIDERATIONS

Nondesignation of this WSA as wilderness would have negligible impacts on local economic conditions. However, designation of the Vale of Tears WSA as wilderness would incrementally help to increase long term recreation use in the Maybell area. Greater public awareness and publicity of the area would also draw wilderness users from outside northwest Colorado. Recreation use of the area is projected to increase from 150 to 300 visitor days per year or more, especially if public access were improved. This increase would generate some long-term increase in local income and although not large, could be noticed in smaller communities in the area such as Maybell. These economic benefits to smaller communities could be even more noticeable if all the areas proposed for wilderness in the northwest part of Colorado became wilderness. Social factors were not considered a significant issue in the study.

SUMMARY OF WSA SPECIFIC PUBLIC COMMENTS

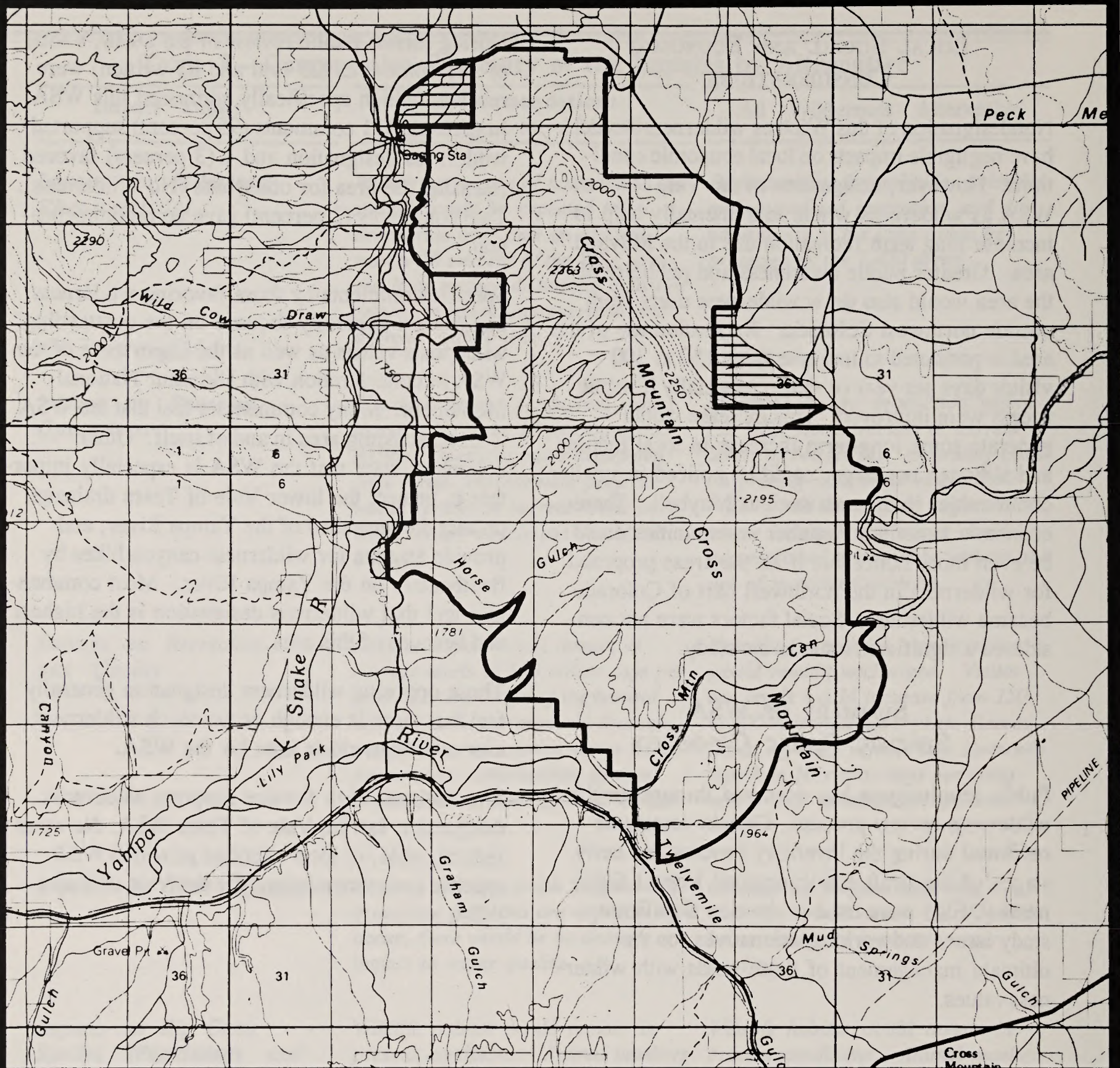
Public involvement has occurred throughout the wilderness review process. Certain comments reviewed during the inventory process and early stages of the draft Environmental Impact Statement (DEIS) were used to develop significant study issues and various alternatives for the ultimate management of those lands with wilderness values.

During formal public review of the DEIS, a total of 117 comments (35 oral and 82 written) were received which specifically addressed this WSA. In general, 111 comments (95 percent) supported wilderness designation and 4 (3 percent) favored releasing the area for other uses (No Wilderness). Two comments (2 percent) gave no recommendation.

Specific comments by those favoring wilderness designation generally focused on the outstanding wilderness values as well as the importance of the WSA in consideration with Dinosaur National Monument. Many commentators feel that the WSA is an outstanding area in and of itself. Other comments state that the WSA is especially important to protect the lower Vale of Tears drainage, protect the viewshed of the Yampa River, and provide an area for wilderness canyon hikes by floatboaters on the Yampa River. Most commentators feel that wilderness designation is the highest and best use of this area.

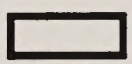
Those opposing wilderness designation generally feel that there is enough or too much wilderness now and favor other uses for the WSA.

The National Park Service supports wilderness designation for the Vale of Tears WSA. No other federal, state, or local agencies provided WSA specific recommendations for the Vale of Tears WSA.



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T 6 N

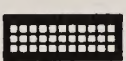
R 98 W R 97 W



RECOMMENDED FOR
WILDERNESS



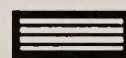
RECOMMENDED FOR
NONWILDERNESS (NONE)



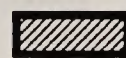
LAND OUTSIDE WSA
RECOMMENDED FOR
WILDERNESS (NONE)



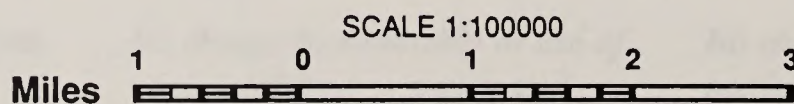
SPLIT ESTATE (NONE)



STATE



PRIVATE (NONE)



Cross Mountain WSA
Proposal
CO-010-230

January 1991

CROSS MOUNTAIN WILDERNESS STUDY AREA

The Study Area -- 14,081 acres

The Cross Mountain WSA (CO-010-230) is located in Moffat County approximately 15 miles west of Maybell, Colorado. The WSA includes 14,081 acres of BLM lands. Two sections of undeveloped Colorado state lands adjoin the WSA. The area is bounded on the north and east by undeveloped private and state lands, and a county road and ways on BLM land; the southern boundary is undefined on undeveloped BLM lands; and the western boundary is defined by undeveloped private lands as well as a county road and ways on undeveloped BLM lands. Most of the surrounding private lands are currently proposed for acquisition by BLM. The WSA is shown on the map.

Cross Mountain is an oblong, flat-topped land mass rising over 2,200 feet above the floodplain of the Yampa and Little Snake Rivers. The mountain trends north-south and forms an easily identifiable landmark in the region. The Yampa River has cut a 1,000 foot deep gorge through the mountain forming a classic example of a superimposed river gorge with spectacular geologic features representing about 1 billion years of geologic history. (See Photo 1)

Erosion of the mountains east and west flanks has exposed colorful, rocky rims, side canyons, and rock outcrops. (See Photo 2) Pinyon-juniper woodlands dominate the area with sagebrush communities scattered throughout the area. Pockets of aspen and mountain brush are found on the east flank of the mountain and a relic stand of ponderosa pine set in red sandstone slick rock adds interest to the area. The broad, flat top of the mountain gently slopes to the south and supports native grasses and wildflowers while small riparian areas are scattered around the WSA.

Cross Mountain is home to a diversity of wildlife and threatened and endangered species. Elk, mule deer, antelope, coyote, mountain lion, fox, and occasional black bear inhabit the mountain. A herd of bighorn sheep reside in and north of Cross

Mountain Canyon. Habitat for the endangered Colorado squawfish, boneytail chub, and humpback chub occurs in the Yampa River here as well as for the Colorado listed threatened razorback sucker. The endangered peregrine falcon inhabits the area and bald eagles roost and hunt in this WSA. The plant *Cirsium ownbeyi* (Ownbey's thistle) is a candidate for endangered listing and the area is also habitat for two more rare endemic plants *Penstemon yampaensis* (Yampa beardtongue) and *Lepodactylon watsonii* (Watson's pricklygilia). As a result of these and other special and unique features, the Cross Mountain Canyon area (3,000 acres) is a designated Area of Critical Environmental Concern. The area provides habitat for many other species of mammals, birds, amphibians, reptiles, and fish.

The WSA was studied under Section 603 of the Federal Land Policy and Management Act (FLPMA) and was included in the Craig District Wilderness Final Environmental Impact Statement (EIS) published November 5, 1990. Four alternatives were analyzed in the EIS; all wilderness alternative with oil and gas leasing (14,081 acres recommended for wilderness designation with oil and gas leasing and no-surface-occupancy stipulations), all wilderness alternative (14,081 acres recommended for wilderness designation) which is the recommendation of this report, Boundary Adjustment alternative (17,800 acres recommended for wilderness designation; the result of adding 3,719 acres of BLM land outside the WSA) and a no wilderness alternative.

Recommendations and Rationale

14,081 acres recommended for wilderness

0 acres recommended for nonwilderness

The recommendation is to designate 14,081 acres of BLM public land as wilderness. The environmentally preferable alternative is the boundary adjustment alternative which designates an area larger



Photo 1. Cross Mountain WSA. The Yampa River rages through the east end of Cross Mountain Canyon.

than the WSA. This would result in the least change in the natural environment over the long term and is the best opportunity to protect and preserve the outstanding wilderness values and special features concentrated on Cross Mountain.

Cross Mountain is recommended for wilderness designation because of the outstanding wilderness values including a diverse array of special features, outstanding scenery, and a wide variety of opportu-

nities for primitive and unconfined recreation experiences. This WSA is unique and harbors a diverse array of wildlife, threatened and endangered species, significant cultural and geologic features and outstanding opportunities for solitude.

The focal point of the WSA is the 1,000 foot deep Cross Mountain Canyon which is a designated Area of Critical Environmental Concern because of a concentration of natural features within a relatively

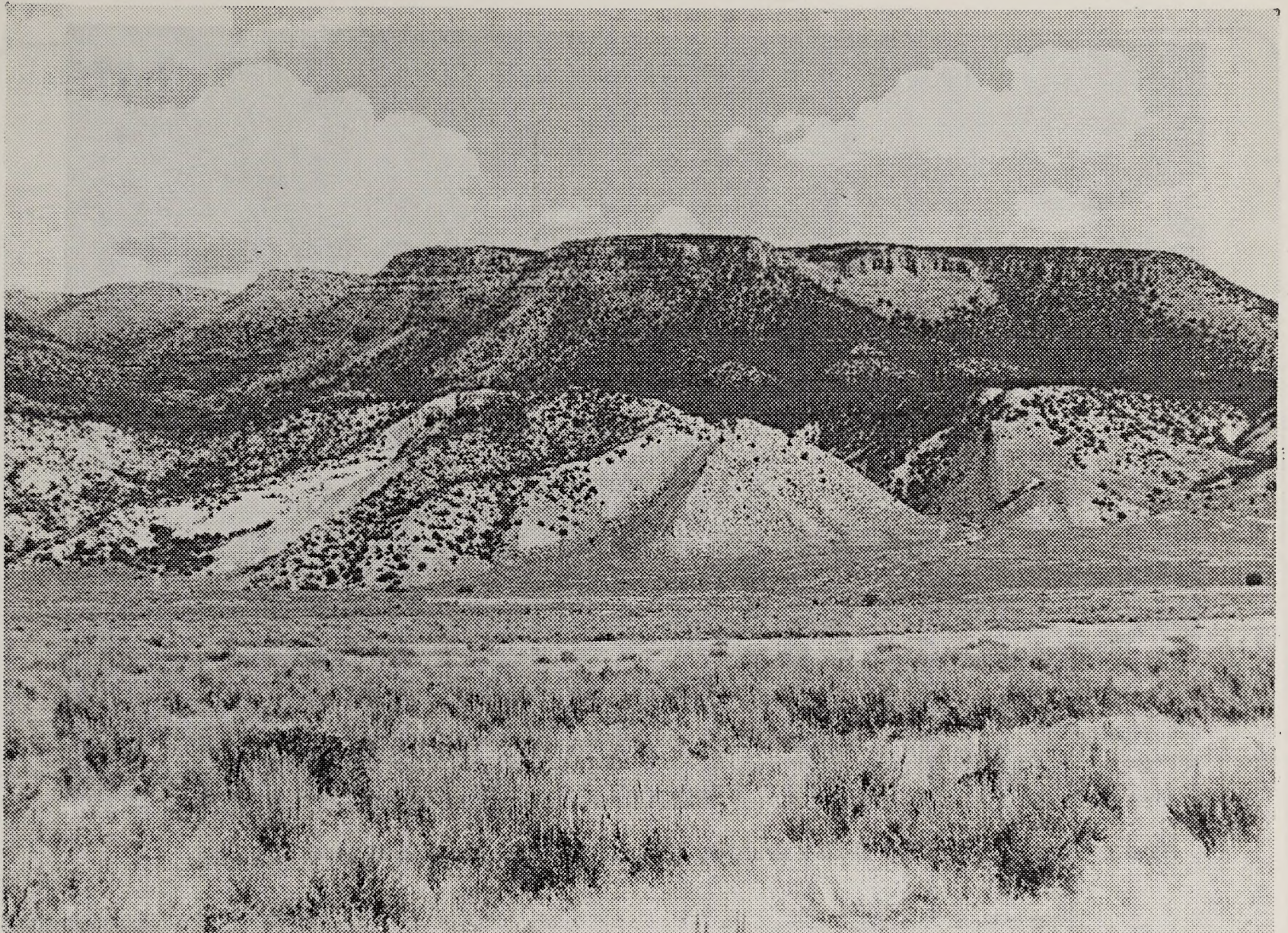


Photo 2. Cross Mountain WSA. View of the west side of Cross Mountain from Douglas Mountain, showing the rugged natural character of Cross Mountain.

small area (3,000 acres). The breathtaking views from the canyon rims provide an unforgettable experience. High risk and challenging whitewater floatboating (Class V to VI) is occurring within the canyon where two commercial outfitters now operate on this 3-1/2 mile segment of the Yampa River.

The relatively low elevation and proximity to U.S. Highway 40 makes this area easily accessible for wilderness recreation opportunities year round. The WSA is also halfway between the Salt Lake City, Utah and Denver, Colorado metropolitan areas and receives use from both areas.

Designation of Cross Mountain as wilderness would preserve a special place with scenic, undeveloped, public lands representative of the semi-arid ecosystems, geologic, and topographic features of the northwest Colorado region. Cross Mountain also provides a scenic background and area for recrea-

tion pursuits to visitors who are traveling to Deerlodge Park in Dinosaur National Monument.

Most of the area is inaccessible to oil and gas drilling because of the extremely steep, rugged topography and the core of Cross Mountain has little to no potential for hydrocarbons. Potential oil and gas reservoir rocks have been eroded off the WSA and no trapping mechanism remains in the elevated central part of Cross Mountain. Analysis of subsurface data indicates the overthrust expressed in a seismic section east of the Cross Mountain uplift lies east of the topographic expression of Cross Mountain. Hence, any potential trapping mechanism would not underlie the majority of the WSA, however the northeast portion has been classified as having a high mineral potential for oil and gas. The structure on the WSAs west side is not overthrust and does not represent a likely area of interest for oil and gas exploration.



Photo 3. Cross Mountain WSA. Boulder scrambling along the Yampa River in Cross Mountain Canyon.

No other major management problems or resource conflicts would result from wilderness designation. There are no mining claims and although other mineral materials are plentiful in the WSA, the abundance of these common resources closer to markets minimizes their value.

No new range improvements have been proposed and no conflicts with range management would occur. Portions of five livestock grazing allotments lie within the recommended area with an estimated

1,985 animal unit month (AUM) of livestock forage available. Existing range improvements within the WSA include one-half mile of fence and 1 developed BLM spring with a small stock tank.

Approximately 500 acres of state school trust lands are proposed for exchange and would help block up the area and enhance manageability by protecting a larger portion of Cross Mountain that contains wilderness values.

Table 1 - Land Status and Acreage Summary of the Study Area

<u>Within Wilderness Study Area</u>	<u>Acres</u>
BLM (surface and subsurface)	14,081
Split Estate (BLM surface only)	0
Inholdings (state, private)	<u>0</u>
Total	14,081
<u>Within the Recommended Wilderness Boundary</u>	
BLM (within WSA)	14,081
BLM (outside WSA)	0
Split Estate (within WSA)	<u>0</u>
Total BLM Land Recommended for Wilderness	14,081
Inholdings (state, private)*	500
<u>Within the Area Not Recommended for Wilderness</u>	
BLM	0
Split Estate	<u>0</u>
Total BLM Land Not Recommended for Wilderness	0
Inholdings (state, private)	0
* Table 5 contains a description of inholdings included within the recommended boundary	

Criteria Considered in Developing the Wilderness Recommendations

WILDERNESS CHARACTERISTICS

Naturalness

The Cross Mountain WSA is predominately natural with negligible human imprints. Cross Mountain is an oblong, flat-topped land mass rising over 2,200 feet above the floodplain of the Yampa and Little Snake rivers. The mountain is 9 miles long by 4 miles wide with elevations ranging from 5,600 feet along the Yampa River in the southwest to 7,804 feet in the north. The mountain trends north-south and forms an identifiable landmark in the region.

The Yampa River has cut a scenic 1,000-foot deep gorge through the mountain forming a classic example of a superimposed river gorge exposing spectacular geologic features representing about 1 billion years of geologic history. Cross Mountain Canyon is a designated Area of Critical Environmental Concern (ACEC) as a result of the threatened and endangered species, geology, scenic, and other natural features concentrated in this area. Erosion has worked the east and west flanks of the mountain exposing colorful rocky rims, side canyons, and rock outcrops.

Pinyon-juniper woodlands dominate the area with sagebrush plant communities scattered throughout. Pockets of aspen and mountain brush communities dot the east flank of the mountain and a relic stand

of ponderosa pine set in red sandstone slick rock adds to the botanic diversity. The broad, flat top of the mountain gently slopes southward and supports native grasses and numerous forbs and wildflowers while small riparian areas are scattered around the mountain.

Cross Mountain provides habitat for a diverse variety of wildlife including elk, mule deer, black bear, mountain lion, fox, coyote, bighorn sheep, antelope, birds of prey, fish, and other mammals, birds, reptiles, and amphibians as well as threatened and endangered species.

Minor imprints of man within the study area include approximately 2 miles of ways, .5 miles of fence, and 1 developed BLM spring with a small stock tank. A guzzler is planned for placement north of the canyon in the near future to provide an additional water source for the bighorn sheep herd in the WSA.

Solitude

The diverse, rugged topography and dense vegetation within the WSA provides outstanding opportunities to experience solitude. The rugged terrain provides excellent screening and allows visitors to isolate themselves from others in the area. Numerous vistas from the top of Cross Mountain and the canyon rim provide a feeling of vastness, open space, and isolation which enhance the opportunities to experience solitude. The numerous side draws and canyons as well as Cross Mountain Canyon, also offer isolation and provide outstanding opportunities to experience solitude.

Primitive and Unconfined Recreation

Cross Mountain offers outstanding opportunities for users to participate in diverse primitive and unconfined recreational activities including hiking, fishing, hunting, backpacking, camping, sightseeing, photography, high risk whitewater floatboating, technical and nontechnical rock climbing, as well as viewing wildlife and cultural sites. (See Photo 3)

Floatboating on the Yampa River in Cross Mountain Canyon is considered to be very technical, representing high risk and challenge to expert enthusiasts. Two special permits were issued in

1990 for commercial whitewater trips through the scenic and rugged 3.5 miles of the canyon. The continuous rapids in the canyon are considered by many to be among the best in the nation and are a relative rarity in much of Colorado.

The National Park Service (Dinosaur National Monument) maintains a parking area and river access point adjacent to the Yampa River at the mouth of Cross Mountain Canyon. This has become a popular spot for people to picnic, fish, takeout for whitewater trips through the canyon, and trailhead for hikes up to the south rim of the canyon. National Park Service estimates for 1989 indicate 29,698 visitors traveled the Deerlodge Park Road to the east end of Dinosaur National Monument. Cross Mountain provides a very important viewshed from the Deerlodge Park Road and parking area. Many of these visitors stop at Cross Mountain to relax, enjoy the Yampa River, the scenery, and to engage in other recreation pursuits.

The natural settings of Cross Mountain including the colorful canyons, draws, rocky rims, diverse vegetation, and wildlife as well as the blocked configuration of the area which encompasses most of Cross Mountain, provide outstanding opportunities for visitor to experience and engage in diverse primitive and unconfined types of recreation activities.

Special Features

The Cross Mountain WSA contains numerous special features considered to be of scientific, educational, scenic, and historical value. The concentration of these special values greatly enhances the wilderness values of Cross Mountain. Although no formal cultural resource inventory has been conducted, it is known that numerous sites are found on Cross Mountain ranging from lithic scatters and campsites to rock shelters and rock art sites. There is high potential for the cultural resources on Cross Mountain to contribute significant information on prehistoric use and occupation in northwest Colorado. This is because of somewhat unique combination of environmental and topographic features on or near Cross Mountain that are likely to have attracted prehistoric peoples throughout the past 12,000 years.

The area also is home to one of only two bighorn sheep herds on BLM lands in northwest Colorado. A portion of the WSA is considered to be severe winter range and winter concentration area (critical habitat) for mule deer.

Cross Mountain Canyon also supports threatened and endangered species. The Yampa river is habitat for the federally-endangered Colorado squawfish, boneytail chub, and humpback chub. In addition, the Colorado-listed threatened razorback sucker is suspected to occur. The federally endangered American peregrine falcon is known to nest in the WSA and the endangered northern bald eagle also occurs in the WSA. The plant *Cirsium ownbeyi* (Ownbey's thistle) is a candidate for listing as endangered and in Colorado is known to occur only in Cross Mountain Canyon. The WSA is habitat for the rare endemic plants *Penstemon yampaensis* (Yampa beardtongue) and *Lepidactylon watsonii* (Watson's pricklygilia).

Cross Mountain Canyon is a classic example of a superimposed river gorge exposing spectacular geologic features in a small area representing about 1 billion years of geologic history. Fossil remains are also found in the WSA representing some 500 million years of time. As a result of these and other special and unique qualities, 3,000 acres of Cross Mountain Canyon within the WSA have been designated as an area of critical environmental concern (ACEC). The ACEC is managed under Visual Resource Management Class I to protect the outstanding scenic quality and natural values of the area. The Yampa River is also listed on the National Park Service Nationwide Rivers Inventory

List and a future wild and scenic river study will include this portion of the WSA. The Yampa River is the only remaining major free-flowing tributary in the Colorado River System with no major regulating structures on the river. High risk and challenging, expert whitewater floatboating, not found elsewhere in the region, occurs on the Yampa River in Cross Mountain Canyon. Two commercial river outfitters now operate through the canyon. One small faulted cave has been identified in the WSA with others suspected, however, none are considered to be significant.

DIVERSITY IN THE NATIONAL WILDERNESS PRESERVATION SYSTEM

Assessing the Diversity of Natural Systems and Features as Represented by Ecosystems

Wilderness designation of this WSA would add a landform and ecosystems which currently have little or no representation in the National Wilderness Preservation System (NWPS) in Colorado. Cross Mountain is in the central part of the Rocky Mountain Forest Province with juniper-pinyon woodland (12,000 acres) and sagebrush steppe (2,081 acres) ecosystems. The sagebrush steppe ecosystem is not represented in Colorado and the juniper-pinyon woodland ecosystem is represented by only one wilderness area in Colorado and only two areas nationwide. Dinosaur National Monument to the west is representative of these ecosystems, and although portions are administratively endorsed for wilderness designation, is not part of the NWPS. (See Table 2)

Table 2 - Ecosystem Representation

<u>Bailey-Kuchler Classification</u>	NWPS Areas		Other BLM Studies	
Province/Potential Natural Vegetation	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
<i>Nationwide</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	2	41,451	21	163,574
Sagebrush Steppe	4	76,129	22	241,526
<i>Colorado</i>				
<u>Rocky Mountain Forest Province</u>				
Juniper-Pinyon Woodland	1	11,181	15	115,134
Sagebrush Steppe	0	0	9	31,960

Expanding the opportunities for solitude or primitive recreation within a day's driving time (five hours) of major population centers

The Cross Mountain WSA is within a day's drive of 3 major population centers. This WSA lies halfway

between major metropolitan areas in Utah and in Colorado and receives use by visitors from both areas. Table 3 summarizes the number and acreage of designated areas and other BLM study areas within a 5-hour drive of the population centers.

Table 3 - Wilderness Opportunities for Residents of Major Population Centers

<u>Population Center</u>	NWPS Areas		Other BLM Studies	
	<u>areas</u>	<u>acres</u>	<u>areas</u>	<u>acres</u>
Salt Lake City/Ogden	11	685,088	42	1,826,904
Provo /Orem	12	730,088	52	2,307,031
Denver	20	1,728,410	21	372,010

Balancing the geographic distribution of wilderness areas

The Cross Mountain WSA would contribute to balancing the geographic distribution of areas

within the National Wilderness Preservation System. The WSA lies between the High Uintas Wilderness (460,000 acres) some 100 miles to the northwest in Utah and the Flat Tops wilderness (235,035 acres) some 60 miles to the southeast in Colorado. However, these landforms and ecosystems are entirely different than those found in the

semi-arid Cross Mountain WSA, thus providing different environmental settings for different types of experiences. Part of Dinosaur National Monument to the west of the WSA has been administratively endorsed for wilderness designation, however, much of this area is not as accessible as Cross Mountain. There are an additional 11 BLM study areas within a 3-hour drive of Cross Mountain of which 4 are recommended for wilderness designation. The Cross Mountain WSA is accessible year-round and expands opportunities to attain diverse wilderness experiences from major metropolitan areas in 2 states.

MANAGEABILITY

The Cross Mountain WSA can be effectively managed to preserve its wilderness character. There are no manageability problems or resource conflicts which would result from wilderness designation. There are no mining claims and while there is one post-FLPMA oil and gas lease, it would not be developed nor encumber management of the area as wilderness. All subsurface minerals in the WSA are under federal ownership.

Approximately 500 acres of state school trust lands are recommended for acquisition which would help to block up the area and improve management of the area as wilderness. An additional section of state land lies adjacent to the south end of Cross Mountain.

Portions of 5 livestock grazing allotments lie within the WSA. Existing range improvements consist of 0.5 miles of fence and 1 developed BLM spring with a small stock tank. Maintenance of these would normally occur without the use of motorized equipment. No new range improvements are proposed.

ENERGY AND MINERAL RESOURCE VALUES

Analysis by BLM shows the Cross Mountain WSA is mapped as a faulted, north-south trending anticline, with steep boundary faults along its east and west flanks. Potential oil and gas reservoir rocks have been eroded off the WSA and no trapping mechanism remains in the elevated central part of Cross Mountain. The perimeter of Cross Mountain, where Quaternary and Tertiary sediments blanket and obscure any structural

complexities, is something of an enigma. Eastern American Energy has drilled 2 deep (9,000+ foot) exploration drill holes (Township 7 North, Range 98 West, Section 14 outside the WSA) and uncovered sedimentary beds through total depth, interpreting overturned beds and thrust faulting. This theorized scenario does not agree with the parameters illustrated on published geologic mapping (Dyner, 1968; McKay, 1974; Kanizay, 1956). It is possible that some as yet undiscovered details will either prove or disprove this hypothesis, but it remains that actual subsurface geology at the northeast end of Cross Mountain is largely sedimentary, and not fully understood.

The Cross Mountain WSA energy and mineral values were evaluated in *Mineral Resources of the Cross Mountain Wilderness Study Area, Moffat County, Colorado, U.S. Geological Survey Bulletin 1759-A* (1989). The report has listed the WSA as having high potential for oil and gas in its eastern section, based on geophysical data, and moderate potential in its western part, due to non-upturned beds associated with the western margin of the Cross Mountain uplift. However, further analysis by BLM finds moderate potential along the eastern perimeter of the WSA and little to no potential in the core of the WSA.

From communication with an industry geophysicist (with confidential subsurface data) the overthrust expressed in a seismic section east of the Cross Mountain uplift lies east of the topographic expression of Cross Mountain. Hence, any potential trapping mechanism would not underlie the majority of the WSA, but only a few hundred acres (parts of Section 23, 26, and 36, Township 7 North, Range 98 West) in the extreme eastern portion of the WSA would have the potential to compromise any possible exploration targets. The potential structure on the WSA's west boundary is subdued, and does not represent a likely area of interest for oil and gas exploration as indicated in the subsurface seismic section. Moderate oil and gas potential exists around the perimeter of Cross Mountain, and exploration is likely to occur in the area where Tertiary and Quaternary sediments cover structural bedrock details near the WSA. The core of Cross Mountain has little potential for hydrocarbons, and follows the zero petroleum potential of Spencer (1982).

The ability to drill oil and gas wells on the WSA is quite limited. Only its inaccessible flat top, and the easily accessed low-angle slopes at the very base are likely drilling locations.

The following exploration scenario is only one conceivable option, but is typical of what could be expected. It has been developed for analysis purposes only for the Final Wilderness EIS. Six drill holes are postulated for further exploration for oil and gas along a trend that includes sections 10, 15, 22, 23, 26, and 36, Township 7 North, Range 98 West, near the northeast corner of the WSA.

Due to the poorly understood and highly speculative nature of this structure, and its questionable ability to have formed producible oil and gas traps, no development scenario has been addressed.

Although mineral materials are plentiful in the WSA, the abundance of this resource in areas closer to markets minimizes its value. Witherbee and Low (1983) have detected anomalous metal concentrations in stream sediment sampling in comparison with other WSAs of similar surficial geology. Thompson (1988) has analyzed stream sediment and outcrop samples in the WSA also, but has concluded that the concentration of these metals were "too low to be of any economic interest" and "do not show any indication of mineral resources."

Limestone and dolomite exposures were sampled for carbonate (CO_3) content with both Madison Limestone and Morgan Formation localities having greater than 90 percent $\text{MgCO}_3 + \text{CaCO}_3$. These are suitable for use in powerplant scrubbing, coal mine dusting, and agricultural applications. The distance of this resource to market discounts its potential value, however. Iron oxide pigments are found in red-beds in the WSA, but contain toxic elements and are of too low a grade to be commercially useful.

Uranium has been produced from the Browns Park Formation elsewhere in northwest Colorado, but

scintillometer studies and sampling (Witherbee and Low, 1983; Thompson, 1988; and Kanizay, 1956) show no notable anomalies or mineralization.

IMPACTS ON RESOURCES

The following comparative impact table (Table 4) summarizes the effects on pertinent resources for the 4 alternatives for this WSA.

As discussed in the Craig District Final Wilderness EIS, impacts on reservoir construction in Cross Mountain Canyon were not analyzed in detail for several reasons. The Colorado River Water Conservation District has attempted in the past to obtain funding and federal clearance to construct a water storage and power generating dam at the mouth of Cross Mountain Canyon. Questions have arisen regarding potential conflicts between wilderness designation and reservoir construction in Cross Mountain Canyon. Reservoir construction was not carried forward as a probable action under the No Wilderness Alternative for Cross Mountain, and this issue has not been analyzed in detail for the following reasons.

There is no current viable proposal for such a project.

With or without designation of Cross Mountain as wilderness, BLM would oppose and would not permit to the extent BLM is authorized under law, any activities which could adversely affect or impact any outstanding values of the Yampa River segment in Cross Mountain, including the river's free-flowing characteristics pending Wild and Scenic River suitability study.

If other obstacles such as threatened and endangered species can be resolved, reservoir construction could occur within designated wilderness with presidential authorization.

Table 4 - Comparative Summary of the Impacts by Alternative

Impact Topics	Recommendation: All Wilderness Alternative (14,081 acres)	All Wilderness with Oil and Gas Leasing Alternative *	Boundary Adjustment Alternative (17,800 acres)	No Wilderness Alternative
<i>Impacts on Wilderness Characteristics</i>	<i>Opportunities for solitude, primitive and unconfined recreation, outstanding scenic quality, and the naturalness of the area would be protected on the entire 14,081 acres of the WSA.</i>	<i>Opportunities for primitive and unconfined recreation, outstanding scenic quality, and the naturalness of the area would be protected on the entire 14,081 acres of the WSA. However, Opportunities for solitude would be temporarily lost on about 1,800 acres in the north-east portion of the proposed area if oil and gas exploration occurs along the boundary outside the WSA.</i>	<i>Opportunities for solitude, primitive and unconfined recreation, outstanding scenic quality, and the naturalness of the area would be protected and increased on 17,800 acres.</i>	<i>Wilderness values would not be legislatively protected. Administrative protection and management of the area as a Special Recreation Management Area and ACEC would provide limited protection of naturalness, solitude, and opportunities for primitive and unconfined recreation. However, opportunities for solitude would be temporarily lost on about 1,800 acres in the northeast portion of the proposed area if oil and gas exploration occurs along the boundary outside the WSA.</i>
<i>Impacts on Ranching Operations</i>	<i>Livestock forage production within the WSA would remain at current levels of 1,985 AUMs. Operating costs on grazing allotments within the WSA would be slightly higher where livestock operations could be accomplished reasonably without the use of motorized vehicles.</i>	<i>Livestock forage production within the WSA would remain at current levels of 1,985 AUMs. Operating costs on grazing allotments within the WSA would be slightly higher where livestock operations could be accomplished reasonably without the use of motorized vehicles.</i>	<i>Livestock forage production within the proposed area would remain at current levels of 2,587 AUMs and at 1,985 AUMs within the WSA. Operating costs on grazing allotments within the proposed area would be slightly higher where livestock operations could be accomplished reasonably without the use of motorized vehicles.</i>	<i>Livestock forage production would remain at current levels of 1,985 AUMs. Operating costs associated with range improvement projects could be slightly higher where livestock operations could be accomplished reasonably without the use of motorized vehicles.</i>

* This alternative was the proposed action in the Final EIS. However, since leasing is not consistent with the Wilderness Act and wilderness management policy, the all wilderness alternative has subsequently been selected as the recommended alternative.

Table 4 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation All Wilderness Alternative (14,081 acres)	All Wilderness with Oil and Gas Leasing Alternative	Boundary Adjustment Alternative (17,800 acres)	No Wilderness Alternative
<i>Impacts on Recreation Use and Quality</i>	<i>Opportunities for primitive and unconfined recreation would remain unchanged. Overall visitor use would increase from current levels of 1,500 visitor days per year to 2,000 visitor days per year.</i>	<i>Opportunities for primitive and unconfined recreation would remain unchanged. However, the primitive recreation experience would decline in the northeast portion of the WSA as a result of outside sights and sounds from oil and gas exploration activities. Overall visitor use would increase from current levels of 1,500 visitor days per year to 2,000 visitor days per year.</i>	<i>Opportunities for primitive and unconfined recreation would increase and be protected on 17,800 acres. Overall visitor use would increase from current levels of 1,500 visitor days per year to 2,000 visitor days per year.</i>	<i>Opportunities for primitive and unconfined recreation would remain unchanged. However, the primitive recreation experience would decline in the northeast portion of the WSA as a result of outside sights and sounds from oil and gas exploration activities. Overall visitor use could increase from current levels of 1,500 visitor days per year to 2,000 visitor days per year.</i>
<i>Impacts on Water Quality</i>	<i>Because no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>	<i>Because no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>	<i>Because no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>	<i>Because no surface-disturbing activities would occur, there would be no change or impact to water quality.</i>
<i>Impacts on Big Game Species (Populations and Habitat) and Eagles</i>	<i>Wildlife habitat for deer and elk would remain in present conditions. Habitat for bighorn sheep would be improved by the installation of a guzzler and populations would be augmented by reintroduction of animals to Cross Mountain. Animal numbers of 350 deer, 15 elk, and 2 pair of golden eagles would remain unchanged. Numbers of bighorn sheep would increase to an estimated 75 animals. Raptors and raptor habitat are protected by special stipulations.</i>	<i>Wildlife habitat for deer and elk would remain in present conditions. Habitat for bighorn sheep would be improved by the installation of a guzzler and populations would be augmented by reintroduction of animals to Cross Mountain. Animal numbers of 350 deer, 15 elk, and 2 pair of golden eagles would remain unchanged. Numbers of bighorn sheep would increase to an estimated 75 animals. Raptors and raptor habitat are protected by special stipulations.</i>	<i>Wildlife habitat for deer and elk would remain in present conditions. Habitat for bighorn sheep would be improved by the installation of a guzzler and populations would be augmented by reintroduction of animals to Cross Mountain. Animal numbers of 350 deer, 15 elk, and 2 pair of golden eagles would remain unchanged. Numbers of bighorn sheep would increase to an estimated 75 animals. Raptors and raptor habitat are protected by special stipulations.</i>	<i>Wildlife habitat for deer and elk would remain in present conditions. Habitat for bighorn sheep would be improved by the installation of a guzzler and populations would be augmented by reintroduction of animals to Cross Mountain. Animal numbers of 350 deer, 15 elk, and 2 pair of golden eagles would remain unchanged. Numbers of bighorn sheep would increase to an estimated 75 animals. Raptors and raptor habitat are protected by special stipulations.</i>

Table 4 - Comparative Summary of the Impacts by Alternative (continued)

Impact Topics	Recommendation: All Wilderness Alternative (14,081 acres)	All Wilderness with Oil and Gas Leasing Alternative	Boundary Adjustment Alternative (17,800 acres)	No Wilderness Alternative
<i>Impacts on Mineral Exploration and Production</i>	<i>The WSA would be closed to oil and gas leasing and to mineral entry for other minerals. No potential for other minerals, little potential for oil and gas and the opportunity for collection of subsurface geologic data would be lost.</i>	<i>The WSA would be open to oil and gas leasing with no-surface-occupancy, but 90 percent of the area would remain inaccessible to exploration and drilling. Other minerals would not be accessible because of a closure to mineral entry. No potential for other minerals, and little or no potential for oil and gas would be lost.</i>	<i>The area would be closed to oil and gas leasing and to mineral entry for other minerals. No potential for other minerals, little or no potential for oil and gas and the opportunity for collection of subsurface geologic data would be lost.</i>	<i>The WSA would be open to oil and gas leasing with a no-surface occupancy stipulation but 90 percent of the area would remain inaccessible to exploration or drilling. Other minerals would be accessible to mineral entry. No interest for other minerals and only minor interest for oil and gas would be expected.</i>
<i>Impacts on Private Lands</i>	<i>Acquisition of portions of adjoining state lands would be pursued. Current uses of the land would continue.</i>	<i>Acquisition of portions of adjoining state lands would be pursued. Current uses of the land would continue.</i>	<i>Acquisition of portions of adjoining state lands would be pursued. Current uses of the land would continue.</i>	<i>Acquisition of portions of adjoining state lands would be pursued. Current uses of the land would continue.</i>

LOCAL SOCIAL AND ECONOMIC CONSIDERATIONS

Designation of the Cross Mountain WSA as wilderness would incrementally help to increase long term recreation use in the Maybell and Craig areas. Greater public awareness and publicity of the area would also draw wilderness users from outside northwest Colorado. Recreation use of the area is projected to increase from 1,500 to 2,000 visitor days per year or more. This increase in recreation use would generate some long-term increase in local income, which although not large, could be noticed in smaller communities in the area such as Maybell. Such long term economic benefits to smaller communities could be even more noticeable if all the areas proposed for wilderness in the northwest part of Colorado were designated. Social factors were not considered a significant issue in the study.

SUMMARY OF WSA SPECIFIC PUBLIC COMMENTS

Public involvement has occurred throughout the wilderness review process. Certain comments reviewed during the inventory process and early stages of the Draft Environmental Impact Statement (DEIS) were used to develop significant study issues and various alternatives for the ultimate management of those lands with wilderness values.

During formal public review of the DEIS, a total of 220 comments were received (55 oral and 165 written) which specifically addressed this WSA. In general, 204 comments (93 percent) supported wilderness designation and 12 (5 percent) favored releasing the area for other uses (nonwilderness). Four comments (2 percent) gave no recommendation. Of the 56 comments received from Moffat

County residents, approximately 64 percent favored wilderness designation and 36 percent favored nonwilderness.

Those favoring wilderness designation generally commented about the uniqueness, biological diversity, stunning scenery, and truly outstanding wilderness values (including a wide variety of outstanding opportunities for primitive and unconfined recreation) within the Cross Mountain area. Many commenters have visited the area and find Cross Mountain to be one of the most outstanding study areas in Colorado. Most commenters feel that the natural wilderness values and special features of Cross Mountain are more important than any mineral resource which might be found in the area. Many commenters favor designating an area larger than the WSA and protecting the wilderness values of the entire mountain. Others stated that the DEIS over emphasized the area's potential for oil and gas development and did not give sufficient consideration to protection of the WSA's significant wilderness resources. Many comments mentioned the variety of threatened and endangered species, biological diversity

(plants and diverse, abundant wildlife), significant cultural resources, caves, spectacular scenery, the unique whitewater floatboating in the canyon, among other qualities.

Those opposing wilderness designation generally feel that there is enough or too much wilderness now and favor other uses for the WSA such as development of the once proposed Juniper-Cross Mountain dam project on the Yampa River and exploration for oil and gas.

The National Park Service and Colorado Department of Natural Resources supports wilderness designation for Cross Mountain.

The Moffat County Commissioners oppose wilderness designation for Cross Mountain and support other uses for the area such as development of the once proposed Juniper-Cross Mountain dam project on the Yampa River and oil and gas exploration. No other federal, state, or local agencies provided specific recommendations for Cross Mountain.

Table 5
Estimated Cost of Acquisition of Non Federal Holdings
Within Areas Recommended for Designation 1/

<u>Legal Description</u>	<u>Total Acreage</u>	<u>Number of Owners 2/</u>	<u>Type of Ownership By Estate</u>		<u>Presently Proposed for Acquisition</u>	<u>Preferred Method of Acquisition</u>	<u>Estimated Cost of Acquisition 3/</u>	
			<u>Surface Estate</u>	<u>Subsurface Estate</u>			<u>Land Costs</u>	<u>Processing Costs</u>
T.7N.,R.98W.Sec 16 Lots 11,12,13,20,21,22,23 Sec 17, Lots 11,12,13,14, 18,19 Sec 20, Lot 1 Sec 21, Lot 2	290	1	State	State	Yes	Exchange	NA	\$ 8,000
T.7N.,R98W.Sec 25, Lots 2,4,6,7 Sec 26, Lot 2, Sec 35, Lots 1,4,5,8 Sec 36, Lots 2,3,4,5,6,8,9, 12,13,14,15,16,18,20,22	210	1	State	State	Yes	Exchange	NA	\$ 8,000

1/Standard Disclaimer: the estimated costs listed in this appendix in no way represents a formal appraisal value of the land or mineral estate, but are rough estimates based on sales or exchanges of lands or mineral estate with similar characteristics to those within the WSA. The estimates are for the purpose of establishing a range of potential costs to the government of acquiring non-federal holdings and in no way represent an offer to purchase or exchange at the cost estimate included in the appendix.

Processing costs are all miscellaneous expenses other than land costs including work month costs, appraisals, title work, escrow tests, etc.

2/If a larger parcel as shown in the first column has been recently subdivided or is jointly owned, this column represents the number of owners that could be involved in any acquisition negotiation.

3/Where exchange is the proposed acquisition method, only administrative costs of processing the exchange are shown. Land costs would not be applicable. Where direct purchase is proposed, an estimate of both the land costs and the processing costs are provided.

